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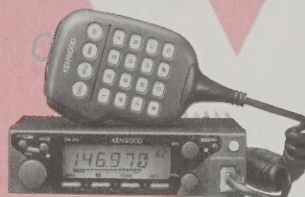
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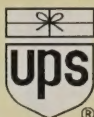
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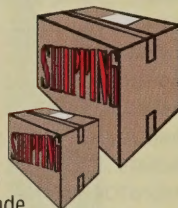
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EBP-33N 4.8v 650ma nicad battery .....	63.95	
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EME-13 Headset w/ear bud/mic/VOX .....	70.95	
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AL-1500 1.5kw PEP out linear (8877) .....	2695.00	2299 <sup>95</sup>
ALS-500M 600w PEP out solid state mob amp .....	799.00	699 <sup>95</sup>
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ARB-700 Amplifier relay buffer .....		29.95



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ADL-1500 1.5kw dummy load with oil .....	59.95	
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ICP-240 240v inrush protector .....	79.95	
QSK-5 Stand alone T/R switch .....	349.00	329 <sup>95</sup>
QSK-5PC PC board kit; T/R switch .....	249.00	229 <sup>95</sup>
CF-5 Cooling fan for QSK-5 .....	39.95	
RCS-4 4-pos wireless remote coax switch .....	139.00	129 <sup>95</sup>
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Note: RCS-8V requires 8-wire control cable.

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AP-143 2m on glass cellular look-alike ant .....	\$ 78.25	69 <sup>95</sup>
APR151.3 2m 3db on glass antenna .....	66.25	59 <sup>95</sup>
KAV-382 On glass replacement mtg kit .....	9.95	
ASC-34 Hole plug for 1 1/2" hole .....	Dw \$ 4.75	49 <sup>95</sup>
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SWL Sloper 120-11m SWL antenna ...Dmwfv	79.95	59 <sup>95</sup>

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US Repeater 97 Mapbook 97/98 edition .....	9.95	
US Repeater CD-ROM info+US hams .Dmwfv	29.95	14 <sup>95</sup>

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D-104-L Crystal mic head (no stand or cable) ..	42.99	
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Night Eagle Brass/black crystal desk mic .....	129.99	119 <sup>95</sup>
T-UG9-D104 Amp mic, 6-wire w/stand .....	99.99	
T-UP9-D104-SE Silver Eagle 6-wire amp .....	129.99	119 <sup>95</sup>
MC-320 Crystal mic cartridge for D-104 .....	19.99	
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RS-7A 5A power supply, 7A surge .....	68.95	59 <sup>95</sup>
RS-10A 7.5A power supply, 10A surge .....	85.95	69 <sup>95</sup>
RS-12A 9A power supply, 12A surge .....	99.95	79 <sup>95</sup>
RS-12S 9A ps, 12A surge, w/speaker .....	112.95	89 <sup>95</sup>
RS-20A 16A power supply, 20A surge .....	121.95	99 <sup>95</sup>
RS-35A 25A power supply, 35A surge .....	197.95	149 <sup>95</sup>
RS-35A/220V 220v 25A ps, 35A surge .....	217.75	169 <sup>95</sup>
RS-50A 37A power supply, 50A surge .....	285.95	219 <sup>95</sup>
RS-70A 57A power supply, 70A surge .....	339.95	259 <sup>95</sup>
RS-20M 16A ps w/meters, 20A surge .....	144.95	119 <sup>95</sup>
RS-35M 25A ps w/meters, 35A surge .....	204.95	169 <sup>95</sup>
RS-50M 37A ps w/meters, 50A surge .....	314.95	239 <sup>95</sup>
RS-70M 57A ps w/meters, 70A surge .....	372.95	289 <sup>95</sup>
VS-20ML Variable 16A ps/meters, 20A surge ..	170.95	139 <sup>95</sup>
VS-35M Variable 25A ps/meters, 35A surge ..	238.95	189 <sup>95</sup>
VS-50M Variable 37A ps/meters, 50A surge ..	330.95	259 <sup>95</sup>
RM-35M 25A rack mt ps/meters, 35A surge ..	318.95	249 <sup>95</sup>
RM-50M 37A rack mt ps/meters, 50A surge ..	354.95	279 <sup>95</sup>
RM-60M 50A rack mt ps/meters, 55A surge ..	467.95	359 <sup>95</sup>
SS-25 20A switching ps, 25A surge .....	161.95	129 <sup>95</sup>
SS-30 25A switching ps, 30A surge .....	186.95	149 <sup>95</sup>
SS-25M 20A switching ps/meters, 25A surge ..	186.95	149 <sup>95</sup>
SS-30M 25A switching ps/meters, 30A surge ..	212.90	169 <sup>95</sup>
12/115 200w solid state 12vdc-115vac inverter	86.95	69 <sup>95</sup>
2412 9A 22-32vdc to 13.8vdc converter .....	73.95	64 <sup>95</sup>
2412-20 16A 22-32vdc to 13.8vdc converter	103.95	89 <sup>95</sup>

## AZDEN (AZD)

PCS-7800H 50w 10m FM/TTP mic .....	Dwfv	389 <sup>95</sup>
PCS-7300H 35w 440 FM/TTP mic .....	Dmwfv	299 <sup>95</sup>

## AZDEN - continued

PCS-9600D 35w 440 FM/9600 baud ..Dmwfv		649 <sup>95</sup>
TS-32P Tone decoder .....	Dmwfv	55 <sup>95</sup>
AZ-21A 5w 2m FM HT/batt/cgr/TTP .....	Dmf	199 <sup>95</sup>
AD-16 DC power cord for HT .....	Dmwv	9 <sup>95</sup>
ARD-10M 10m HT gain antenna .....	Dmwfv	39 <sup>95</sup>
BP-11A Extra 5w battery .....	Dmwfv	59 <sup>95</sup>
LC-16 Soft case .....	Dmwfv	19 <sup>95</sup>
SDX-514W Speaker/mic .....	Dmwfv	49 <sup>95</sup>
DM-10 20 ohm headphones; HF Xcvr ..Dmwfv		49 <sup>95</sup>
HS-03 Boom mic/headphones; HF Xcvr Dmwfv		69 <sup>95</sup>
PTT-01 Switch; boom mic/headph ..Dmwfv		39 <sup>95</sup>
PTT-02 VOX for boom mic/headph ..Dmwfv		49 <sup>95</sup>

## B & K (B&K)

### AUDIO TEST INSTRUMENT

2005A RF generator .....	\$275.00	234 <sup>95</sup>
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### CAPACITANCE METERS

810B Capacitance meter .....	\$ 99.95	
815 Tester (cap/res/Hfe/diode/batt) .....	99.95	
830 200 pF to 200mF autoranging meter .....	339.00	289 <sup>95</sup>
875A Digital LCR meter .....	199.00	169 <sup>95</sup>
878 Universal hand-held LCR bridge .....	275.00	219 <sup>95</sup>

### COUNTERS

1803C 100 MHz frequency counter .....	\$209.00	169 <sup>95</sup>
1823 175 MHz universal counter .....	399.00	339 <sup>95</sup>
1856A 2.4 GHz 1 ppm multi-function ctr .....	499.00	399 <sup>95</sup>

### CRT RESTORER/ANALYZER

490 Tri Dynamic restorer/analyzer .....	1099.00	939 <sup>95</sup>
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### DIGITAL PRODUCTS

DP-21 Digital logic probe .....	\$ 34.95	
DP-51 Digital probe .....	Dm 95.00	39 <sup>95</sup>
911 Digital temperature meter .....	79.95	
921 Digital temp meter w/dual inputs .....	99.95	

### EPROM PROGRAMMERS

840 EPROM programmer .....	\$199.00	169 <sup>95</sup>
841 4-socket EPROM programmer .....	249.00	219 <sup>95</sup>
842 Universal programmer, PC card interface	695.00	589 <sup>95</sup>
843 Universal prog, parallel port interface ...	795.00	679 <sup>95</sup>
846 Universal prog, parallel port interface ...	495.00	419 <sup>95</sup>
847 Univ prog, 4-socket/par port interface ...	595.00	499 <sup>95</sup>

### GENERATORS

3001 Audio generator .....	\$ 79.95	
4010 2 MHz function generator .....	229.00	194 <sup>95</sup>
4011 5 MHz function generator w/counter .....	284.00	239 <sup>95</sup>
4017 10 MHz func gen w/counter/sweep .....	369.00	314 <sup>95</sup>
4040 20 MHz func gen/ctr/sweep/AM/FM .....	499.00	424 <sup>95</sup>

### INSULATION TESTERS

305 Ins tester, 1000 megohms, 500vdc applied	\$129.00	109 <sup>95</sup>
306 Ins tester, 100 megohms, 500vdc applied	129.00	109 <sup>95</sup>
307 Multi-range analog insulation tester .....	189.00	159 <sup>95</sup>
308 Multi-range digital insulation tester .....	259.00	219 <sup>95</sup>

### HIGH VOLTAGE PROBE

HV-44 Direct-reading 40kV DC probe .....	Dm \$109.00	89 <sup>95</sup>
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### ISOLATION TRANSFORMER

TR-110 Isolation transformer .....	\$219.00	189 <sup>95</sup>
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### MULTIMETERS (ANALOG)

114A 20,000 ohms/volt analog multimeter ...	\$ 42.95	
117 Pocket size analog multitester .....	13.95	
300 Insulation tester .....	129.00	109 <sup>95</sup>

### MULTIMETERS (DIGITAL)

320 600A AC clamp meter .....	\$ 79.00	69 <sup>95</sup>
330 750A AC multi-function clamp meter .....	89.00	79 <sup>95</sup>
340A 300A multi-function clamp meter .....	109.00	89 <sup>95</sup>
350A 1000A multi-function clamp meter .....	149.00	129 <sup>95</sup>
367 2000A AC/DC clamp meter .....	169.00	149 <sup>95</sup>
369 700A AC/DC true RMS clamp meter .....	199.00	169 <sup>95</sup>
388A Test Bench DMM, 0.5% accuracy .....	119.00	99 <sup>95</sup>
389 Test Bench DMM, 0.25% accuracy .....	139.00	109 <sup>95</sup>
390 Test Bench DMM, 0.1% accuracy .....	159.00	134 <sup>95</sup>
391 Test Bench DMM, 0.05% accuracy .....	179.00	149 <sup>95</sup>
2405 Mini Pro DMM .....	27.95	
2406 Mini Pro DMM w/temperature .....	49.95	

## Reg Sale

## B & K - continued

2407 Min Pro autoranging DMM w/bargraph	55.95	
2700 Credit-card size bargraph DMM .....	34.95	
2703A Tool kit DMM, basic model, 0.5% .....	39.95	
2704A Tool kit DMM w/cap/transistor/diode ..	59.95	
2706 Tool kit DMM, 2704A plus temperature	79.95	
2707 Tool kit DMM, 2704A plus logic & freq ..	89.95	
2831A Digital bench multimeter .....	299.00	249 <sup>95</sup>
2832 3 1/2-dig 0.5% lab multimeter .....	D 219.00	189 <sup>95</sup>
2833 4 1/2-dig 0.05% true RMS multimeter ..D	400.00	339 <sup>95</sup>
2835 3 1/2-dig 0.5% bench type LCD DMM ..D	270.00	229 <sup>95</sup>
2860A 3 1/2-dig 0.5% ruggedized DMM .....	99.95	
2870 Survivor DMM w/bargraph, true RMS ...	149.00	129 <sup>95</sup>
2880 3 1/2-dig 0.3% bar true RMS RS232 DMM	189.00	159 <sup>95</sup>
3000 Autobench DMM .....	270.00	229 <sup>95</sup>
5330 Power factor clamp-on meter .....	779.00	669 <sup>95</sup>
5331 Power factor clamp-on meter .....	739.00	629 <sup>95</sup>
5350EX Intrinsically safe/haz environ DMM ..	699.00	599 <sup>95</sup>
5360 50,000 count .1% bar true RMS DMM ..	249.00	214 <sup>95</sup>
5370 50,000 count .05% bar true RMS DMM	289.00	244 <sup>95</sup>
5380 50,000 count .025% bar true RMS DMM	349.00	299 <sup>95</sup>
5390 50K ct .025% resistive pwr disturb DMM	395.00	339 <sup>95</sup>
5460 50K ct .1% bar true RMS bench DMM ..	425.00	359 <sup>95</sup>
5470 50K ct .05% bar RMS RS232 bench DSO	525.00	449 <sup>95</sup>
5490 50K ct .025% bar RMS RS232 bench DMM	675.00	574 <sup>95</sup>
TLA-20 Autobench test lead set .....	269.00	249 <sup>95</sup>

### OSCILLOSCOPES

1541C 40 MHz 6" dual trace scope .....	\$799.00	679 <sup>95</sup>
2000 Autobench oscilloscope .....	795.00	674 <sup>95</sup>
2120 20 MHz dual trace oscilloscope .....	549.00	449 <sup>95</sup>
2125 20 MHz dual time base oscilloscope ....	646.00	519 <sup>95</sup>
2160A 60 MHz dual trace delayed sweep .....	1099.00	939 <sup>95</sup>
2190A 100 MHz three trace delayed sweep ...	1599.00	1359 <sup>95</sup>
2260 60MHz analog scope/cursors/readout D	1399.00	1169 <sup>95</sup>
2522A Digital storage oscilloscope .....	1099.00	929 <sup>95</sup>
2560 60MHz DSO, cursors/readouts/RS232 D	2395.00	2029 <sup>95</sup>
5020 20MHz 40 MS/s digital storage scope ..	2219.00	1889 <sup>95</sup>
5024 20MHz 40 MS/s differential input DSO	2290.00	1949 <sup>95</sup>
5034 30MHz 40 MS/s differential input DSO	2330.00	1979 <sup>95</sup>
5100 100MHz 40 MS/s digital storage scope	2495.00	2119 <sup>95</sup>
5105 100MHz 40 MS/s IEEE interface DSO ...	2695.00	2289 <sup>95</sup>
5150 150MHz 200 MS/s digital storage scope	4995.00	4239 <sup>95</sup>

### POWER SUPPLIES

1604 Portable isolated AC supply .....	Dm \$114.00	69 <sup>95</sup>
1604A Portable isolated AC supply .....	114.00	99 <sup>95</sup>
1646 0-16V, 0-10A power supply .....	Dm 499.00	279 <sup>95</sup>
1651 Power supply; (2) 0-24vdc, .5A; 5V, 4A	429.00	359 <sup>95</sup>
1653 0-150V, 2A isolated AC ps .....	319.00	279 <sup>95</sup>
1655 0-150V, 3A isolated AC ps/leak tester ..	529.00	449 <sup>95</sup>
1670 Triple output DC power supply .....	199.00	169 <sup>95</sup>
1680 Fixed 6A 13.8vdc power supply .....	50.95	
1682 Fixed 15A 13.8vdc power supply .....	99.95	
1686 High current DC power supply .....	199.00	169 <sup>95</sup>
1688 3-14VDC, 25A non. power supply .....	299.00	259 <sup>95</sup>
1705 0-30VDC, 0-1A LED readout ps .....	D 299.00	259 <sup>95</sup>
1710 0-30VDC, 0-1A power supply .....	229.00	194 <sup>95</sup>
1711 0-60VDC, 0-2A power supply .....	309.00	264 <sup>95</sup>
1715 0-60VDC, 0-2A LED readout ps .....	379.00	324 <sup>95</sup>
1730 0-30VDC, 0-3A power supply .....	315.00	269 <sup>95</sup>
1735 0-30VDC, 0-3A LED readout ps .....	380.00	329 <sup>95</sup>
1740 0-60VDC, 0-4A power supply .....	499.00	419 <sup>95</sup>
1743 0-35VDC, 0-6A LED readout ps .....	499.00	419 <sup>95</sup>
1746 0-16VDC, 0-10A power supply .....	499.00	419 <sup>95</sup>
1760 (2) 0-30V, 2A; (1) 4-6.5V, 5A LED ps ...	649.00	549 <sup>95</sup>

### SEMICONDUCTOR TESTERS

510 Portable transistor tester .....	\$259.00	219 <sup>95</sup>
520B Industrial transistor tester .....	420.00	359 <sup>95</sup>
541 Component comparator .....	Dm 449.00	249 <sup>95</sup>
545 Circuit analyzer analog signature .....	2950.00	2499 <sup>95</sup>
560A Programmable PC board tester .....	2995.00	2549 <sup>95</sup>
AK-560A Software package for 560A .....	495.00	399 <sup>95</sup>
898 SIMM tester .....	725.00	619 <sup>95</sup>

### SPECTRUM ANALYZERS

2615 500 MHz spectrum analyzer .....	1795.00	1529 <sup>95</sup>
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# PRICE LIST

## B & K - continued

2620	500 MHz spec analyzer w/tracking gen	2195.00	1869 <sup>95</sup>
2625	1.05GHz spec analyzer w/AM/FM demod	2595.00	2199 <sup>95</sup>
2630	1.05GHz spec an w/demod, tracking gen	3395.00	2889 <sup>95</sup>

## TELEPHONE TEST INSTRUMENTS

1045B	Telephone product tester	\$599.00	499 <sup>95</sup>
1050	Telephone product analyzer	2260.00	1899 <sup>95</sup>

## VIDEO TEST INSTRUMENTS

1211D	Portable color generator	\$235.00	199 <sup>95</sup>
1249B	NTSC generator w/RGB	569.00	489 <sup>95</sup>
1251	NTSC signal generator	1195.00	999 <sup>95</sup>
1260	Deluxe NTSC signal generator	1995.00	1699 <sup>95</sup>
1280	Computer monitor video generator	429.00	369 <sup>95</sup>

## ACCESSORIES

CP-3	AC/DC clamp meter	\$86.95	
PR-28	HV multimeter probe w/std dual banana	59.95	
PR-32	RF detector/demod scope probe w/BNC	59.95	

Other accs available on special order. B & K stocked mostly at Milwaukee. Call Ron Glisch for B & K.

## B & W COAX SWITCHES (B&W)

CSR-5G	5-position, side connectors	\$51.95	
CS-6G	6-position, for desk/wall mounting	51.95	

Note: Above switches provide grounding of unused terminals, & are supplied w/face plates & knobs.

## LOW-PASS FILTER

FL-10/1500	1.5-30 MHz, 1kw, 52 ohms	\$75.95	
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## ANTENNAS

AP-10	57" portable 40/20/15/10/6/2m ant	\$69.95	
AT-55	40/20/15/10m 55' trap antenna	87.95	82 <sup>95</sup>
AT-110	80/40/20/15/10m 110' trap antenna	99.50	94 <sup>95</sup>
AT-110K	As above, but kit	84.50	59 <sup>95</sup>
AS-160	160/80/40/20m 137' trap dipole	164.50	154 <sup>95</sup>
AS-80	80/40/20m 78' trap dipole	127.50	119 <sup>95</sup>
AS-40	40/20/15/10m 40' trap dipole	164.50	154 <sup>95</sup>
AS-20	20/15/10m 23' trap dipole	127.50	119 <sup>95</sup>
AXS-160	160/30m 96' trap dipole	99.50	94 <sup>95</sup>
AXS-80	80/40/15m 72' trap dipole	127.50	119 <sup>95</sup>
AC-1.8-30	Continuous 1.8-30 MHz antenna	185.00	169 <sup>95</sup>
ACS-1.8-30	Continuous 1.8-30MHz antenna	260.00	239 <sup>95</sup>
BWD-1.8-30	1.8-30 MHz 90' folded dipole	198.00	179 <sup>95</sup>
BWDS-1.8-30	1.8-30 stainless 90' folded dip	273.00	249 <sup>95</sup>

## BELDEN (BEL)

### 52 OHM COAXIAL CABLE

8216	RG-174 (sub-miniature)	per ft.	26¢
8216	100 ft. Roll	37.29	24 <sup>95</sup>
8216	500 ft. Roll	129.87	89 <sup>95</sup>
8216	1000 ft. Roll	259.74	169 <sup>95</sup>
9201	RG-58 (solid center)	per ft.	20¢
9201	100 ft. Roll	29.74	18 <sup>95</sup>
9201	500 ft. Roll	109.89	79 <sup>95</sup>
9201	1000 ft. Roll	216.45	139 <sup>95</sup>
8240	RG-58U (solid center)	per ft.	26¢
8240	100 ft. Roll	38.20	24 <sup>95</sup>
8240	500 ft. Roll	131.00	89 <sup>95</sup>
8240	1000 ft. Roll	262.00	169 <sup>95</sup>
8259	RG-58AU (stranded center)	per ft.	29¢
8259	100 ft. Roll	43.00	26 <sup>95</sup>
8259	500 ft. Roll	137.00	89 <sup>95</sup>
8259	1000 ft. Roll	276.00	169 <sup>95</sup>
8219	RG-58AU (stranded, foam)	per ft.	33¢
8219	100 ft. Roll	57.25	29 <sup>95</sup>
8219	500 ft. Roll	155.00	99 <sup>95</sup>
8219	1000 ft. Roll	387.50	189 <sup>95</sup>
8262	RG-58C (non-contaminating)	per ft.	36¢
8262	100 ft. cut		32 <sup>95</sup>
8262	500 ft. Roll	173.00	119 <sup>95</sup>
8262	1000 ft. Roll	346.00	219 <sup>95</sup>
9258	RG-8X (stranded, foam)	per ft.	39¢
9258	100 ft. Roll	81.25	34 <sup>95</sup>
9258	500 ft. Roll	217.56	129 <sup>95</sup>

## BELDEN - continued

9258	1000 ft. Roll	490.00	239 <sup>95</sup>
8237	RG-8U	per ft.	64¢
8237	100 ft. Roll	102.00	59 <sup>95</sup>
8237	500 ft. Roll	390.00	249 <sup>95</sup>
8214	RG-8U (foam)	per ft.	59¢
8214	100 ft. Roll	101.00	54 <sup>95</sup>
8214	500 ft. Roll	452.00	259 <sup>95</sup>
8214	1000 ft. Roll	898.00	489 <sup>95</sup>
9913	RG-8U (low loss)	100 ft. Roll	113.00
9913	250 ft. Roll	244.00	129 <sup>95</sup>
9913	500 ft. Roll	486.00	239 <sup>95</sup>
9913F	RG-8U (low loss, flexible)	per ft.	87¢
9913F	100 ft. Roll	134.00	79 <sup>95</sup>
9913F	250 ft. Roll	289.00	159 <sup>95</sup>
9913F	500 ft. Roll	575.00	299 <sup>95</sup>
9251	RG-8A (non-contaminating)	per ft.	87¢
9251	100 ft. Roll	132.09	79 <sup>95</sup>
9251	500 ft. Roll	492.84	299 <sup>95</sup>
8267	RG-213 (non-contaminating)	per ft.	87¢
8267	100 ft. cut		79 <sup>95</sup>
8267	500 ft. Roll	597.18	349 <sup>95</sup>
8242	RG-9U (double shielded)	per ft.,m	4 <sup>95</sup>
8242	100 ft. Roll,m	715.00	349 <sup>95</sup>
<b>75 OHM COAXIAL CABLE</b>			
8241	RG-59U (73 ohm, solid center)	per ft.	29¢
8241	100 ft. Roll	44.00	25 <sup>95</sup>
8241	500 ft. Roll	123.00	79 <sup>95</sup>
8241	1000 ft. Roll	246.00	149 <sup>95</sup>
8238	RG-11 (75 ohm, stranded center)	per ft.	79¢
8238	100 ft. Roll	124.32	74 <sup>95</sup>
8238	500 ft. Roll	470.64	279 <sup>95</sup>
8213	RG-11 (75 ohm, solid, foam)	per ft.	69¢
8213	100 ft. cut		59 <sup>95</sup>
8213	500 ft. Roll	360.00	239 <sup>95</sup>
<b>ROTOR CABLE</b>			
8484	4-wire; 4-20 ga; U-105	per ft.	28¢
8484	100 ft. Roll	48.00	24 <sup>95</sup>
8484	500 ft. Roll	185.00	99 <sup>95</sup>
8484	1000 ft. Roll	370.00	189 <sup>95</sup>
8448	8-wire; 2-18, 6-22 ga; CD-45/HAM-IV	per ft.	29¢
8448	100 ft. Roll	103.75	24 <sup>95</sup>
8448	500 ft. Roll	412.50	119 <sup>95</sup>
8448	1000 ft. Roll	820.00	229 <sup>95</sup>
9405	8-wire; 2-16, 6-18 ga; AR-40/HAM-IV/TX	per ft.	69¢
9405	100 ft. cut		64 <sup>95</sup>
9405	500 ft. Roll	585.00	299 <sup>95</sup>
9405	1000 ft. Roll	1167.50	569 <sup>95</sup>

## ANTENNA WIRE

8000	No. 14 stranded ant wire	per ft.	21¢
8000	100 ft. Roll	30.50	17 <sup>95</sup>
8000	1000 ft. Roll	275.00	159 <sup>95</sup>

## No. 8 ALUMINUM GROUND WIRE

8018	Multiples of 50 ft.	each	\$19.00
8018	500 ft. Roll	150.00	99 <sup>95</sup>

Note: All above roll pricing is for rolls as shown only; all other lengths, even if more than roll length shown or a multiple of roll length shown, are sold at the per ft. price.

## FOAM COAX w/PL-259s ON BOTH ENDS

9349	3' RG-58AU foam	\$19.32	14 <sup>95</sup>
9350	15' RG-58AU foam	21.63	16 <sup>95</sup>
9352	50' RG-58AU foam	32.13	24 <sup>95</sup>
9354	50' RG-8U foam	60.90	46 <sup>95</sup>
9355	75' RG-8U foam	84.00	64 <sup>95</sup>
9356	100' RG-8U foam	101.85	79 <sup>95</sup>

## BELMERIT (BLM)

DM-3050	Wide range dig multimtr/freq test Dw	\$59.95	36 <sup>95</sup>
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## BENCHER (BEN)

BY-1	Iambic keyer paddle w/black base	\$84.95	79 <sup>95</sup>
BY-2	Iambic keyer paddle w/chrome base	99.95	94 <sup>95</sup>

## BENCHER - continued

BY-3	Iambic keyer paddle, gold plated	299.95	249 <sup>95</sup>
BY-4	Iambic paddle/blk base/gold components	169.95	149 <sup>95</sup>
ST-1	Single lever keyer paddle, black base	84.95	79 <sup>95</sup>
ST-2	Sgl lever kyr paddle, chrome base	99.95	89 <sup>95</sup>
ST-3	Single lever kyr paddle, gold plated	299.95	199 <sup>95</sup>
ST-4	Sgl lever paddle/blk base/gold comp	169.95	99 <sup>95</sup>
RJ-1	Dlx hand key w/navy knob/black base	81.95	
RJ-2	Dlx hand key w/navy knob/chrome base	94.95	
XW-1	Low voltage DC fuse panel	79.95	
YA-1	1kw low pass filter	64.95	
ZA-1A	3.5-30 MHz 1:1 balun	39.95	
HWK	Balun hardware kit for 2" boom	9.95	

## BIRD (BIR)

43	Thurline Directional wattmeter, SO-239s	\$263.95	
4300-400	Peak reading conversion kit	125.95	
43P	Peak reading directional meter, SO-239s	396.95	
4431	Wattmeter, variable RF tap, SO-239s	464.95	
	Elements (Table 1) 50H-1000H	each	88.95
	Elements (Table 1) 2500H, 5000H	each	126.95
	Elements (Table 1) 25-1000 MHz	each	71.95
	Low-power elements (Table 2)	each	95.95

TABLE 1 - Standard Elements

Frequency Bands (MHz)

Power Range	2-30	25-60	50-125	100-250	200-500	400-1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

TABLE 2 - Low-Power Elements

1 watt	Cat. No.	2.5 watts	Cat. No.
25-30 MHz	025-1	25-30 MHz	025-2
30-35 MHz	030-1	30-40 MHz	030-2
35-40 MHz	035-1	40-50 MHz	040-2
40-50 MHz	040-1	50-60 MHz	050-2
50-60 MHz	050-1	60-80 MHz	060-2
60-80 MHz	060-1	80-95 MHz	080-2
80-95 MHz	080-1	95-150 MHz	095-2
95-125 MHz	095-1	150-250 MHz	150-2
110-160 MHz	110-1	200-300 MHz	200-2
150-250 MHz	150-1	250-450 MHz	250-2
200-300 MHz	200-1	400-850 MHz	400-2
275-450 MHz	275-1	800-1000 MHz	801-2
425-850 MHz	425-1		
800-1000 MHz	801-1		

CC-1	Carrying case	46.95	
EC-1	Element case	36.95	
8080	25w dummy load/type N male QC	107.95	89 <sup>95</sup>
25-T-MN	50w dummy load w/type N male	105.95	
50-T-MN	50w dummy load w/type N male	138.95	
4273	1.5-35 MHz variable RF sig sampler*	133.95	
4273-100	For Bird equipment installation	144.95	
4275	20-1000 MHz variable RF sampler*	128.95	
* 2 QC connectors required - not included			
4275-100	For Bird equipment installation	144.95	
4304A	25-1000 MHz 500w wattmeter	519.95	
<b>QUICK CHANGE CONNECTORS (QC)</b>			
4240-050	UHF female (SO-239)	each	\$8.95
4240-179	UHF male (PL-259)	each	46.95
4240-062	Type N female	each	8.95
4240-125	BNC female	each	20.95
4240-132	BNC male	each, Δmw	56.00

Other Bird items available on special order

## BUCKMASTER (BUC)

HamCall	CD-ROM ham listings; IBM/Mac	\$50.00	
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	Reg	Sale
<b>BUTTERNUT (BUT)</b>		
HF-6VX 80/40/30/20/15/10m 26' vert ant ....	\$272.00	219 <sup>95</sup>
HF-9VX 80/40/30/20/17/15/12/10/6m vert ...	376.00	269 <sup>95</sup>
A17-12 17 & 12m kit for HF-6VX .....	39.95	
CPK Counterpoise kit .....	100.00	89 <sup>95</sup>
MPS Mounting post sleeve .....	8.95	
RMK-II Roof mounting kit w/radials .....	100.00	89 <sup>95</sup>
STR-II Radial kit only .....	65.95	
TBR-160S 160m resonator for HF-6VX.....	98.00	89 <sup>95</sup>
HF-2V 80/40m 32' vertical .....	220.00	179 <sup>95</sup>
30-MRK 30m resonator for HF-2V .....	78.95	
TBR-160S 160m resonator .....	98.00	89 <sup>95</sup>
HF-5B 2 el 20/17/15/12/10m butterfly beam	414.00	329 <sup>95</sup>

	Reg	Sale
<b>CES (CES)</b>		
410 Personal Patch interconnect .....Dmw	\$250.00	149 <sup>95</sup>
4700VP Telephone interconnect .....	292.00	169 <sup>95</sup>
SDI-50 Dlx splx/dplx autopatch/rptr controller	760.00	469 <sup>95</sup>

	Reg	Sale
<b>CQ (CQX)</b>		
1998 Amateur Radio Calendar .....	\$ 9.95	
1998 Radio Classics Calendar .....	9.95	
33 Simple Weekend Projects .....	15.95	
Amateur Radio Almanac .....	19.95	
Building and Using Baluns and Ununs .....	19.95	
Buyers Guide .....	15.95	
Contest Video Getting Started in Contesting	19.95	
DXing Video Getting Started in DXing .....	19.95	
Ham Sat Video Getting Started Amateur Satellites	19.95	
Ham Video Getting Started in Ham Radio ....	19.95	
Lew McCoy on Antennas .....	15.95	
Packet Radio Operator's Manual .....	15.95	
Packet Video Getting Started in Packet Radio	19.95	
Quad Antenna Book .....	15.95	
Shortwave Propagation Handbook .....	19.95	
Vertical Antenna Handbook .....	9.95	
VHF How To Book .....	15.95	
VHF Video Getting Started in VHF .....	19.95	
W6SAI HF Antenna Handbook .....	19.95	

	Reg	Sale
<b>CAMBRIDGE (CAM)</b>		
The Art of Electronics (book) .....	\$ 59.95	

	Reg	Sale
<b>CASTLE RIDGE (CRO)</b>		
<b>SOLID BASE COPPERWELD ANTENNA WIRE</b>		
AN-122 100 feet No. 12 .....	\$ 24.95	
AN-123 150 feet No. 12 .....	29.95	
AN-124 250 feet No. 12 .....	49.95	
AN-126 500 feet No. 12 .....	84.95	
AN-128 1000 feet No. 12 .....	154.95	139 <sup>95</sup>
AN-142 100 feet No. 14 .....	19.95	
AN-143 150 feet No. 14 .....	24.95	
AN-144 250 feet No. 14 .....	32.95	
AN-146 500 feet No. 14 .....	56.95	
AN-148 1000 feet No. 14 .....	104.95	99 <sup>95</sup>
AN-181 250 feet No. 18 .....	14.95	
AN-182 500 feet No. 18 .....	24.95	

	Reg	Sale
<b>CENTAUR (CEN)</b>		
CP-1 Cricket Pulser Station tuning accessory	\$ 67.95	
B11W10-50 1:1 3kw PEP balun for dipole ....	49.95	
B11Y10-50 1:1 3kw PEP balun for yagi .....	49.95	
B41Y10-50 4:1 3kw PEP balun for yagi .....	64.95	
B41LW10-50 4:1 ladder line to coax balun ...	64.95	

	Reg	Sale
<b>CHEROKEE (CHR)</b>		
AH-50 5w 6m FM HT w/nicad batt .....	\$399.95	209 <sup>95</sup>
BC-09 6 AA cell battery holder .....	13.95	
BC-12 8 AA cell battery holder .....	17.95	
CC-27 Leatherette case .....	13.95	
DA-27 12v slide-on adapt; BC-09/NP-126 ..	13.95	
DC-27 Drop-in nicad charger .....	79.95	
DW-12 Wall charger .....	7.95	
EX-01 Speaker/mic .....	29.95	
MA-27 Mobile-com cig/ext ant adapter ....	44.95	

	Reg	Sale
<b>CHEROKEE - continued</b>		
NP-126 12v nicad battery .....	69.95	
SA-5 Extended super flex 6m antenna .....	24.95	

	Reg	Sale
<b>CLOCKS</b>		
AEA World Clock .....	Dmw	\$ 25.00 9 <sup>95</sup>
BMI 972A 12" 12-hour wall clock .....	28.95	
BMI 972AD 14" 12/24-hour wall clock .....	32.95	
BMI 973A 12" 24-hour wall clock .....	49.95	
MFJ 105C 24-hour quartz wall clock .....	19.95	
MFJ 107B 24-hour digital clock .....	9.95	
MFJ 108B 24/12-hour dual disp digital clock	19.95	
MFJ 112 Deluxe world map clock .....	24.95	
MFJ 114 Large LED 24-hour clock .....	39.95	
MFJ 116 24/12-hr LED clock/10 minute timer	14.95	
MFJ 118 Giant 24/12 hour LCD clock .....	24.95	

	Reg	Sale
<b>COAX SEAL (UNV)</b>		
104 1/2" x 60" coax seal .....	\$ 2.95	

	Reg	Sale
<b>COMET (CMT)</b>		
<b>MOBILE ANTENNAS</b>		
B-10 2m/440 2.15db 12" cell look-alike ant	\$ 39.95	
B-10NMO 2m/440 2.15db 12" cell look-alike NMO	39.95	
B-20 2m/440 2.15/5db 30" cell look-alike ant	56.95	
B-20NMO 2m/440 2.15db/5db 30" cell look NMO	56.95	
CA-2X4SR 2m/440 3.8/6.2db 40" mob ant ...	64.95	
CA-220MR 220 4.2db 3' 3" fold-over ant ....	49.95	
CA-HV 40/15/10/6/2m 5' 10" mobile ant .....	139.95	129 <sup>95</sup>
L-14 20m loading coil for CA-HV .....	36.95	
L-18 17m loading coil for CA-HV .....	29.95	
CHL-28J 2m/440 3/5.5db 36" mobile ant ....	35.95	
CHL-28JNMO 2m/440 3/5.5db 36" NMO ant .	35.95	
CHL-62S 2m/440 3.5/6db 42" mobile ant ....	49.95	
CHL-62SNMO 2m/440 3.5/6db 42" NMO ant .	49.95	
CHL-350 10/6m 0/2.15db fold-over 7' ant ....	79.95	
FL-7HA 40m 40" mobile antenna .....	82.95	59 <sup>95</sup>
FL-14HA 20m 37" mobile antenna .....	82.95	59 <sup>95</sup>
FL-50HA 6m 33" mobile antenna .....	82.95	59 <sup>95</sup>
FS-92B 2m/440/1.2 2.1/4.1/6.8 23" N .Dmw	82.95	59 <sup>95</sup>
HA-4S 40/15/12/10m 4' 5" mobile ant .....	199.95	179 <sup>95</sup>
L-14HS 20m loading coil for HA-4S .....	39.95	
L-18HS 17m loading coil for HA-4S .....	39.95	
HA-028 10m 33" 1/4 wave mobile ant ..Dmwfv	82.95	49 <sup>95</sup>
HA-035 80m 45" mobile antenna .....	82.95	
HA-050 6m 33" 1/4 wave mobile antenna .....	82.95	
HP-32 2m/440 3/5.5db 34" 350/250w ant ...	89.95	
M-24B 2m/440 1.7/4.1db mag mt ant w/BNC	39.95	
M-24M 2m/440 1.7/4.1db mag ant w/PL259	39.95	
QE-07 40m 50" mobile antenna .....	82.95	
QE-14 20m 49" mobile antenna .....	82.95	
QE-21 15m 49" mobile antenna .....	82.95	
QE-28 10m 46" mobile antenna .....	82.95	
OP-07 40m optional element for QE ant ....	42.95	
OP-14 20m optional element for QE ant ....	42.95	
OP-21 15m optional element for QE ant ....	42.95	
OP-28 10m optional element for QE ant ....	42.95	
QE-5 2m/440 2.15/5.5db 38" quick release ..	54.95	
R-2000 900MHz 5.1db 19" type N mob ant ..	42.95	
SBB-1 2m/440 1.5/2.15db 17" flex mobile ...	39.95	
SBB-1NMO 2m/440 1.5/2.15db 17" flex NMO	39.95	
SBB-2 2m/440 2.15/3.8db 18" black mobile	39.95	
SBB-2NMO 2m/440 2.15/3.8db 18" blk NMO	39.95	
SBB-5 2m/440 3/5.5db 38" black mobile ant	59.95	
SBB-5NMO 2m/440 3/5.5db 38" black NMO ..	59.95	
SBB-7 2m/440 4.5/7.2db 4' 7" black mob ant	82.95	
SBB-7NMO 2m/440 4.5/7.2db 4' 7" blk NMO .	82.95	
SB-14 6m/2m/440 43" chrome mobile ant ...	69.95	
SB-15 6m/2m/440 2.15/4.5/7.2db 5' chr mob	99.95	
SBB-25 2m 4.1db black mobile antenna .....	49.95	
SB-25NMO 2m 4.1db 4' 8" NMO mob ....Dmf	49.95	39 <sup>95</sup>
SBB-25NMO 2m 4.1db black NMO mob ant ..	49.95	
SB-44 440 5db 29" mobile antenna .....	54.95	
SB-83 2m/440/cell 3/6/8.4db 35" type N ant	78.95	
SB-94 2m/440/1.2 2.15/5.1/7.2db 24" N ant	75.95	
SBB-94 2m/440/1.2 black 24" N antenna ....	75.95	

	Reg	Sale
<b>COMET - continued</b>		
SB-97 2m/440/1.2 3/6.8/9.6db 39" type N ...	89.95	
SB-123 1.2GHz 7.2db 24" type N mobile ant	54.95	
SB-214W 2m/220 3' 1.7/3.4db mob ant .....	62.95	
SBB-224NMO 2m/220/440 2.15/3.2/5.5 blk NMO .	79.95	
SF-245 2.4 GHz 7db 18" fg type N ant .....	61.95	
Z-750 2m/440 2.1/5.5db 39" theft resistant	62.95	
Z-780 2m/440 4.5/7.2db 5' theft resistant ...	82.95	

	Reg	Sale
<b>MOBILE MOUNTS, ETC</b>		
3D4M Mobile mt, 13' coax w/UHF connectors	\$ 24.95	
3D4N Mobile mt, 13' coax w/type N .....	28.95	
3D5M Mobile mt, 16.5' coax w/UHF connectors	27.95	
5D4N Roof mount, 13' coax w/type N .....	31.95	
AD-10N N-NMO mount adapter .....	17.95	
AD-15M UHF-NMO mount adapter .....	17.95	
CA-MS1 Mag mt only, no coax; add 3D4M, etc	26.95	
CG-4M RS-2 gutter mount w/13.5' coax .....	29.95	
CK-3M Dlx 2-step 10' cable w/UHF connectors	33.95	
CK-3M5 Dlx 2-step 16.5' cable w/UHF connects	39.95	
CK-5N Dlx cable assembly w/type N .....	47.95	
CM-5M Hvy duty mag mt, coax, max 4' ant ..	39.95	
CQ-5M Dlx black QD trunk lip mt w/17' coax	66.95	
CR-5M Std coax assy, 16.5' coax, UHF conn .	19.95	
CT-5M Trunk lip mount w/17' coax .....	39.95	
GR-5M Dlx tnk lip mt w/ coax; matches SB ...	67.95	
GR-5N Dlx N tnk lip mt w/ coax; matches SB	69.95	
MS-3FVNN Std duty mag mount w/type N .....	49.95	
MS-5LXMM Dlx mag mt, 2-step cable/UHF mt	57.95	
RS-2 Small gutter mount .....	22.95	
RS-6 Pipe clamp mount .....	29.95	
RS-9 Trunk lip mount, no coax .....	13.95	
RS-20 Gtr mt; small/med ants, no coax ....Dv	29.95	19 <sup>95</sup>
RS-21 Adj 360 degree hatch/tnk mt, no coax	34.95	
RS-81 Adj trunk/hatch mount, no coax .....	34.95	
RS-500 Mini heavy duty gutter mount .....	29.95	
RS-520 Mini heavy duty trunk/hatch mount .	29.95	
RS-820 Low profile trunk lip mount, no coax	45.95	
RS-850 Lug rack/to 1.75" pipe mt, no coax .	42.95	
WS-1M Window clip mt w/UHF connectors ....	64.95	

	Reg	Sale
<b>BASE STATION ANTENNAS</b>		
CA-62DB 52-54MHz 6.5db 21.75' base ant ..	\$164.95	154 <sup>95</sup>
CA-712EF 440 9db 10' 5" base antenna .....	139.95	129 <sup>95</sup>
CA-ABC21 2m 3.4db 4' 7" base antenna .....	59.95	
CA-ABC22A 2m 6.5db 9' 5" base/rptr ant ....	79.95	
CA-ABC23 2m 7.8 db 13' 4" base/rptr ant ...	135.95	124 <sup>95</sup>
CA-F22GF 136-175 6db 8' 10" tun ....ΔTmwv	169.95	109 <sup>95</sup>
CA-F72GF 440-470 6db 3' 6" tunable ant ....	129.95	119 <sup>95</sup>
CA-Super22 220 6.6db 8' 2" base ant .....	159.95	149 <sup>95</sup>
CMR-241 2m/440 4.5/7.2db 6.5' rptr ant Dvw	174.95	159 <sup>95</sup>
CX-333 2m/220/440 6.5/7.8/9db 10.25' ant	199.95	179 <sup>95</sup>
CYA-1216E 1.2GHz 16el 16.6db 4' 5" N beam	149.95	139 <sup>95</sup>
DS-15 6m/2m/440/900/1.2 discone antenna	129.95	119 <sup>95</sup>
FP-19 900 MHz 16db 7' 4" type N base/rptr .	121.95	112 <sup>95</sup>
GP-3 2m/440 4.5/7.2db 5' 11" base/rptr ant	109.95	99 <sup>95</sup>
GP-6 2m/440 6.5/9db 10' 2" base/rptr ant ..	174.95	164 <sup>95</sup>
GP-9 2m/440 8.5/11.9db 17' 8" base/rptr ....	224.95	199 <sup>95</sup>
GP-9N 2m/440 8.5/11.9db 17' 8" N base/rptr	224.95	199 <sup>95</sup>
GP-15 6/2m/440 3/6.2/8.6db 8' base .....	174.95	164 <sup>95</sup>
GP-21/CA-1221S 1.2 14.8db 8.5' N base/rptr	189.95	169 <sup>95</sup>
GP-24 2.4GHz 12.4db 2' type N base/rptr ....	229.95	199 <sup>95</sup>
GP-93 2m/440/1.2 4.5/7.2/10db 5' 7" type N	144.95	134 <sup>95</sup>
GP-98 2m/440/1.2 6.5/9/13.5db 9' 8" N ant .	224.95	199 <sup>95</sup>
GPX-2010 2m/440 9.5/13.2db 23' base Δmwfv	399.95	259 <sup>95</sup>
PYA-913 900MHz 13el 15.8db 4' 8" type N beam	169.95	159 <sup>95</sup>

	Reg	Sale
<b>DUPLEXERS AND TRIPLEXERS</b>		
CF-142 1.3-150/200-480 600/400w UHF/leads	\$ 79.95	
CF-360A 1.3-30/50-470 600w UHF w/leads .	69.95	
CF-360B 1.3-30/50-470 600w UHF/common lead	69.95	
CF-413A 440/1.2 500/200w N w/leads .....	74.95	
CF-413B 440/1.2 500/200w N/UHF/N leads .	74.95	
CF-416A 2m/440 800/500w UHF w/leads .....	54.95	
CF-416C 2m/440 800/500w N/UHF/N leads .	54.95	
CF-416W 1.3-250/400-1400 400/200w N/leads	79.95	
CF-530 1.3-90/125-470 600w UHF w/leads .	74.95	
CF-706 1.3-56/75-320 350w UHF w/leads ...	74.95	



# PRICE LIST

## COMET - continued

CF-4130A	440/1.2 500/200w N, no leads	74.95
CF-41601	2m/440 800/500w UHF/UHF/N, no leads	52.95
CF-4160J	2m/440 800/500w SO239, no leads	58.95
CF-4160K	2m/440 800/500w all UHF, no leads	52.95
CFX-324A	2m/220/440 600w UHF w/leads	88.95
CFX-324B	2m/220/440 600w UHF, no leads	85.95
CFX-431A	2m/440/900-1.2 N/UHF/V/N, leads	89.95
CFX-431B	2m/440/900-1.2 N/UHF/UHF/N, leads	89.95
CFX-514	HF/2m/440 800/800/500w UHF w/leads	84.95
CFX-514J	HF/2m/440 800/800/500w UHF, no leads	79.95
CFX-4310B	2m/440/900-1.2 N/UHF/V/N, no leads	84.95
CFX-4310C	2m/440/1.2; Kenwood TM-741A/941A	84.95
CFX-5140	HF/6m/2m/440 800/800/500w UHF, no leads	79.95

## HT AND HAND-HELD SCANNER ANTENNAS

CH-32	2m/440 1.75" BNC antenna	\$ 29.95
CH-72S	2m/440 0/3.2db 15" BNC antenna	29.95
CH-701X	2m/440/900 2/3.4/5.5db 19" BNC	54.95
CH-720C	2m/440 semi-rigid 0/3.8db 18" BNC	39.95
CH-722SA	2m/440 3/5.5db BNC whip ant	45.95
CY-1205BNC	1.2GHz 11db 7" BNC beam	49.95
SH-55	2m/440 1.5/3.2db 15" BNC ant	33.95
SH-95	2m/440/1.2 1.5/2.15/5.5db BNC ant	49.95
SMA-3	2m/440 1.2/1.7db 9.75" SMA ant	39.95
SMA-501	2m/440/900 1.5" SMA ant	29.95
SMA-503	2m/440 8.75" SMA antenna	33.95

## SWR/POWER METERS & MINIMETERS

CM-120	1240-1300 MHz type N minimeter	\$ 99.95
CM-690	1.9-60 MHz 20/150w minimeter	79.95
CM-720	140-150/430-450 MHz minimeter	79.95
CM-720N	140-150/430-450 type N minimeter	84.95
CM-903	900-920 MHz type N minimeter	99.95
CMX-1	1.8-60 MHz 2000w SWR/pwr/rem head	209.95 189 <sup>95</sup>
CMX-2	1.8-200MHz 200w SWR/pwr/rem head	199.95 179 <sup>95</sup>
CMX-3	140-525 MHz 200w SWR/pwr/rem head	189.95 169 <sup>95</sup>
EKS-3	10' remote head extension cable	23.95

## ACCESSORIES

CS-290P	1500MHz 150w N lightning protect	\$ 39.95
CS-400P	500MHz 250w lightning protect	34.95
CSP-30	Mini speaker w/magnet mt	34.95
CSP-80	Mini spkr w/mag mt, noise filt, mute	39.95
CSW-20N	0-1300MHz N coax switch	99.95 64 <sup>95</sup>
HM-P2F	Mini spkr/mic; Ali/Ico/Sta/Yae	32.95
HM-P2K	Mini spkr/mic for Kenwood	32.95
HM-P4F	Mini "HT" spkr/mic; Ali/Ico/Sta/etc	32.95
HM-P4K	Mini "HT" spkr/mic for Kenwood	32.95
HM-P4Y	Mini "HT" spkr/mic for Yaesu	32.95

## Communications Specialists (COM)

SS-32P/SS-32PA	Prog CTCSS encoder	\$ 28.95
SS-32SP	Hybrid micro-sized encoder	27.95
TE-32	32-tone CTCSS prog encoder box	49.95
TE-64	64-tone CTCSS/burst switch enc box	79.95
TS-32P	32-tone CTCSS prog encoder/decoder	57.95
DTD-1	DTMF decoder	49.95
ID-8	Automatic morse station identifier	69.95

## CONNECTORS

### AMPHENOL COAX CONNECTORS (AMP)

83-1SP-1050	Male coax plug (PL-259)	\$ 1.95
83-1SP	Silver plated coax plug (PL-259)	2.95
Van Gorden (VAN)	silver plated teflon PL-259	2.99
83-185	Reducer for RG-58 (UG-175)	.95
83-168	Reducer; RG-59/RG-8X (UG-176)	.95
83-1AP	Right angle adaptor (UG-646)	5.95
83-1J	Double female adaptor (PL-258)	3.95
83-1R	Female chassis mt socket (SO-239)	2.95
83-1H	Hood; in-line use w/83-1R (UG-106)	4.95
83-1T	T-connector adaptor (M-358)	8.95
83-877	Double male adaptor	10.95
83-878	Single hole 3/8" chassis socket	2.95
31-002	BNC male connector for RG-58	3.95
31-012	BNC male connector; RG-59/RG-8X	4.95
31-221	BNC female chassis socket	2.95

## CONNECTORS - continued

82-24	Type N female chassis mt socket	4.95
82-61	Type N male connector for RG-8	7.95
82-64	Type N right angle adaptor	20.95
82-202-1006	Type N male; 8214/9913/9913F	7.95
82-209	Type N female in-line for RG-8	7.95
34025	Type N male connector for RG-58	6.95

### AMPHENOL COAX ADAPTORS (AMP)

2900	SO-239 to BNC male adaptor	\$ 9.95
4400	SO-239 to type N male adaptor	13.95
34125	Type N female - PL-259 adapt	21.95
31-28	BNC female to PL-259 adaptor	9.95
83-10	SO-239 to Motorola/phono plug	10.84 6 <sup>95</sup>

### AIM COAX CONNECTORS & ADAPTORS (AIM)

25-7351	Chassis mt SO-239 double female	\$ 3.95
25-7365	BNC female to SO-239	3.95
25-7420	BNC male to SO-239	2.95
26-8010	Type N double female	3.95
26-8011	Type N chassis mount	2.95
26-8015	N male to SO-239	4.95
26-8016	BNC female to N male	4.95
26-8017	BNC male to N female	4.95
27-8110	BNC female to RCA male	1.95 Δmf
27-8120	BNC female to PL-259	2.95
27-8130	BNC double male	3.95
27-8140	BNC T; 2 female, 1 male	2.95
27-8142	BNC T, 3 male	6.40 Δmwfv
27-8450	BNC chassis mt, 4 screw holes	2.95
27-8460	3/8" hole BNC chassis mt	1.95
27-8470	Dual BNC chassis mount	3.95
29-3855	BNC female to SMA male	3.95
29-4105	SO-239 to TNC male adaptor	Δmw 3.95
29-4110	Double female adaptor	Δmw 2.95
29-4120	"T" 1 male, 2 female	Δmw 4.95 3 <sup>95</sup>
29-4125	"T" 3 female	Δmw 4.95 3 <sup>95</sup>
29-4130	Rt angle female/male adapter	Δmw 4.95 3 <sup>95</sup>
29-4140	SO-239 to mini PL-259	2.95
29-4145	SO-239 - PL-259 adapter	Δm 3.95
29-4150	UHF male - BNC female adapt	Δmf 2.95
29-4155	Mini SO-239 - BNC male adapt	Δf 5.95 3 <sup>95</sup>

### CONNECTORS UNLIMITED (CON)

306	SO-239 to BNC male adaptor	Δm \$ 2.76 99 <sup>95</sup>
1721	7-pin DIN plug	Δm 1.38 69 <sup>95</sup>
X-3013	8-pin female mic plug	Δmw 3.11 2 <sup>95</sup>

### Switchcraft 1/4" Plugs w/Solder Terminals (SWI)

267	3-conductor, plastic handle	Δm \$ 5.50 2 <sup>95</sup>
237	3-cond, plastic handle, rt angle plug	Δm 5.15 95 <sup>95</sup>
260	3-conductor w/screw terminals	Δm 6.95 3 <sup>95</sup>
297	3-conductor, metal handle	Δm 6.55 3 <sup>95</sup>
250	2-conductor, plastic handle	3.95
220	As abv, w/screw terminals, rt angle plug	5.95
280	2-conductor, metal handle	4.95 3 <sup>95</sup>

### SWITCHCRAFT PHONO-TYPE CONNECTORS (SWI)

3501MC	Phono plug with cable clamps	\$ .95
3502	Shielded phono plug	2.95
3507	RF-type phono plug	3.95

### VANCO MICROPHONE CONNECTORS (VCO)

CBC-2	2-pin female mic plug	\$ 3.95
CBC-3	3-pin female mic plug	2.95
CBC-4	4-pin female mic plug	4.95
CBC-4P	Panel mt 4-pin male	2.95
CBC-5	5-pin female mic plug	3.95
CBC-5P	Panel mt 5-pin male	2.95
CBC-6	6-pin female mic plug	4.95
CBC-6P	Panel mt 6-pin male	3.95
JCBC-8	8-pin female mic plug	5.95
CBC-8P	Panel mt 8-pin male	5.95

### KENWOOD DIN PLUGS (KEN)

7-pin DIN plug	\$ 4.95
8-pin DIN plug	6.95
13-pin DIN plug	9.95

### VANCO MINI PHONE PLUGS (VCO)

P-25	2.5mm sub-miniature phone plug	\$ .99
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## CONNECTORS - continued

P-35	3.5mm miniature phone plug	.99
P-12V	Cig lighter plug w/leads	2.95

## Connect Systems (CSY)

CS-700	Simplex interconnect	Δmwfv \$485.00 269 <sup>95</sup>
CS-800	Full duplex patch & repeater controller	485.00 359 <sup>95</sup>
CS-900	Simplex interconnect	485.00 359 <sup>95</sup>
82000	Full dplx patch/rptr controller	Δmwfv 713.00 419 <sup>95</sup>

CD-2	DTMF/CTCSS/DCS decoder unit/RS-232	284.00 249 <sup>95</sup>
CD-2P	PC application program for CD-2	113.00 99 <sup>95</sup>
LT-2P	PC application program for LT-2	Δm 113.00 59 <sup>95</sup>

## COYNE (COY)

MacHam General	Δm	\$ 34.95 29 <sup>95</sup>
MacHam Advanced	Δm	34.95 29 <sup>95</sup>
MacHam Extra	Δm	34.95 29 <sup>95</sup>
MacHam Radio Morse Code training soft	Δm	39.95 34 <sup>95</sup>

## CROSS DEVICE (CRS)

STUF	Coax connector waterproofing filler	\$ 4.95
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## CUSHCRAFT (CUS)

VHF/UHF FM BEAMS (Vertical polarization)		
A148-3S	2m, 3 el wideband beam	\$ 47.95
A148-10S	2m, 10 el wideband beam	85.00 79 <sup>95</sup>
A148-20S	2 A148-10S vert stacked	233.00 189 <sup>95</sup>
A449-6S	440 MHz, 6 el, 3' boom, 10 db	45.95
A449-11S	440 MHz, 11 el, 4.5' boom, 13 db	69.00 64 <sup>95</sup>
A270-6S	2m/440, 3/3 el, 2.8' boom, 7.8 db	75.00 69 <sup>95</sup>
A270-10S	2m/440, 5/5 el, 6.17' boom, 10 db	99.00 89 <sup>95</sup>

### FM VERTICAL STACKING KITS\* (Adds 3 db)

A14-SK	Harness only for 2 A148-3S	Δmwfv \$ 48.00 24 <sup>95</sup>
A148-VPKS	Stack kit; 2 A148-3S/10S	Δmwfv 108.00 79 <sup>95</sup>
A148-SK	Harness only; 2 A148-10S	Δmwfv 48.00 39 <sup>95</sup>
A449-VPKS	Stack kit; 2 A449-6S/11S	Δmwfv 65.00 54 <sup>95</sup>
A449-SK	Harness only; 2 A449-6S/11S	Δmwfv 48.00 29 <sup>95</sup>

\*Prices are for stacking kits only

### FM RINGOS - 1/2 Wave Verticals - 3.75 db

AR-10	10m FM Ringo, 1000w	\$ 85.00 79 <sup>95</sup>
AR-6	6m FM, 1000w	71.00 64 <sup>95</sup>
AR-2	2m FM, 1000w	50.00 44 <sup>95</sup>
AR-220	220 MHz FM, 500w	Δmf 49.00 39 <sup>95</sup>
AR-450	440 MHz FM, 500w	35.95
AR-270	2m/440 MHz FM, 250w, 3.7/5.5db	88.00 79 <sup>95</sup>
AR-270B	2m/440 MHz FM base ant	128.00 99 <sup>95</sup>

### RINGO RANGERS - FM Verticals - 6 db

ARX-6	6m FM Ringo Ranger	\$259.00 199 <sup>95</sup>
ARX-2	2m FM Ringo Ranger	60.00 54 <sup>95</sup>
ARX-2B	2m FM Ringo Ranger II, 1000w	73.00 59 <sup>95</sup>
ARX-220B	220 FM Ringo Ranger II, 500w	73.00 64 <sup>95</sup>
ARX-450B	440 FM Ringo Ranger II, 500w	73.00 64 <sup>95</sup>
ARX-450BN	440 Ringo Ranger II/type N Dwf	88.00 69 <sup>95</sup>

### HIGH PERFORMANCE 2m/440 VERTICALS

ARX-270N	2m/440 9/12 db fg type N ant	\$310.00 249 <sup>95</sup>
ARX-270U	2m/440 9/12 db fg SO-239 ant	310.00 249 <sup>95</sup>

### TWIST, OSCAR BEAMS (Horiz/Vert Polarization)

A148-20T	2m 20el 10.8'bm 11.1db twist	\$133.00 109 <sup>95</sup>
22XB	2m 22el 19.3'bm 14db circ beam/relay	298.00 229 <sup>95</sup>
719B	432 19 el beam	142.00 119 <sup>95</sup>
729B	432 29 el beam	225.00 189 <sup>95</sup>
738XB	432 38el 14.3'bm 15.5db circ w/relay	276.00 219 <sup>95</sup>
PS-4A	Remote polarity switch	Δmwfv 150.00 79 <sup>95</sup>

### BOOMER ANTENNAS

617-6B	6m Boomer, 6 el, 34' boom, 14 db	\$435.00 329 <sup>95</sup>
124WB	2m Boomer, 4 el, 4' boom, 10.2 db	73.00 64 <sup>95</sup>
13B2	2m Boomer, 13 el, 15' boom, 15.8 db	142.00 119 <sup>95</sup>
17B2	2m Boomer, 17 el, 31' boom, 18 db	246.00 199 <sup>95</sup>
26B2	2 13B2s vertically stacked	406.00 299 <sup>95</sup>
220B	220 Boomer, 17 el, 19' boom, 17db	Δf 192.00 129 <sup>95</sup>
224WB	220 Boomer, 4 el, 3' boom, 10.2db	59.00 54 <sup>95</sup>
225WB	220 wideband Boomer, 15el, 10'bm, 15.5db	153.00 124 <sup>95</sup>

### BOOMER STACKING KITS\*

617-SK	Harness, pwr divider; 2 6176Bs	Δmwfv \$160.00 69 <sup>95</sup>
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## CUSHCRAFT - continued

	Reg	Sale
22-SK Harness, power divider; 2 13B2s .....	100.00	89 <sup>95</sup>
22N-SK Harness, pwr divider; 2 17B2s .....	165.00	129 <sup>95</sup>
26B2-VPK Vertical polar kit; 2 13B2s .....	175.00	139 <sup>95</sup>
220-SK Harness, pwr divider; 2 220Bs Dmwf .....	98.00	39 <sup>95</sup>
220-QK Quad stacking kit for 4 220Bs ....Dw	390.00	89 <sup>95</sup>
PD-2 Power divider for 2 13B2s .....	49.95	
PD-2N Power divider for 2 17B2s .....	91.00	84 <sup>95</sup>
PD-4 Power divider for 4 13B2s .....	63.00	56 <sup>95</sup>
PD-4N Power divider for 4 17B2s .....	113.00	99 <sup>95</sup>
PD-224 Power divider; 4 220 Boomers .Dmwf	61.00	29 <sup>95</sup>

\*Prices are for stacking kits only

## VHF/UHF BEAMS (Horizontal polarization)

A50-3S 6m, 3 el, 6' boom, 8 db, stainless hdwre	\$110.00	99 <sup>95</sup>
A50-5S 6m, 5 el, 12' boom, 10 db, stainless hdwre	182.00	149 <sup>95</sup>
A50-6S 6m, 6 el, 20' boom, 11db, stainless hdwre	304.00	249 <sup>95</sup>
A148-10S 2m, 10 el wideband beam .....	85.00	79 <sup>95</sup>
A430-11S 430 MHz, 11 el, 4' boom, 13 db ....	69.00	64 <sup>95</sup>

## HORIZONTAL STACKING KITS\* (Adds 3 db)

A561-SK For 2 A50-6S .....	Dmwf \$ 63.00	29 <sup>95</sup>
A17-SK For 2 A144-7S, 79" spacing ....Dmwf	48.00	19 <sup>95</sup>
A41-SK For 2 A430-11S, 26" spacing .Dmwf	48.00	19 <sup>95</sup>

\*Prices are for stacking kits only

## PROJECT GOLD SERIES MOBILE ANTENNAS

CG-144AS 2m 3/4" mt coil & whip only .....	\$114.00	99 <sup>95</sup>
CG-270AS 2m/440 3/4" mt coil & whip only ....	114.00	99 <sup>95</sup>

## CUSHCRAFT/SIGNALS MOBILE ANTENNAS

CS-28M 10m magnet mt antenna .....	\$ 66.00	59 <sup>95</sup>
CS-50 6m 3/4" hole mt 3 db antenna ....Dmwf	55.00	29 <sup>95</sup>
CS-50M 6m magnet mt 3 db antenna .....	66.00	59 <sup>95</sup>
CS-50T 6m trunk lip mt 3 db ant ....Dmwf	64.00	39 <sup>95</sup>
CS-147M 2m magnet mt 3 db antenna .....	\$ 66.00	59 <sup>95</sup>
CS-147A 2m coil & whip only .....	44.95	
CS-220 220 3/4" hole mt 3 db antenna ..Dmwf	55.00	29 <sup>95</sup>
CS-220M 220 magnet mt 3 db antenna .....	66.00	59 <sup>95</sup>
CS-220T 220 trunk lip mt 3 db ant ....Dmwf	64.00	39 <sup>95</sup>
CS-1450M 440 1/2 wave mag mt ant ....Dmwf	42.00	24 <sup>95</sup>
CS-450 440 3/4" hole mt 5 db antenna ..Dmwf	55.00	39 <sup>95</sup>
CS-450M 440 magnet mt 5 db antenna .....	66.00	59 <sup>95</sup>
CS-450T 440 trunk lip mt 5 db ant ....Dmwf	64.00	49 <sup>95</sup>
CS-450A 440 coil & whip only .....	43.00	24 <sup>95</sup>
CS-270M 2m/440 3.7/6 db magnet mt ant ..	87.00	79 <sup>95</sup>
CS-270A 2m/440 coil & whip only .....	60.00	54 <sup>95</sup>

## MOUNTS ONLY FOR ABOVE MOBILE ANTENNAS

CG-MG Gold series magnetic mount .....	\$ 35.95	
CG-MGN Gold series mag mt w/N connector .	35.95	
CS-MG Magnetic mount .....	29.95	
CS-MGN Magnetic mount w/N connector .....	29.95	
CS-TL Trunk lip mount .....	29.95	

## SKYWALKER HF BEAMS

40-2CD 40m, 2 el, 23' boom, 5.5 db .....	\$626.00	449 <sup>95</sup>
20-4CD 20m, 4 el, 32' boom, 10 db .....	665.00	469 <sup>95</sup>
20-3CD 20m, 3 el, 20' boom, 8 db .....	485.00	349 <sup>95</sup>
15-4CD 15m, 4 el, 20' boom, 10 db .....	399.00	289 <sup>95</sup>
15-3CD 15m, 3 el, 14' boom, 8 db ....Dmwf	305.00	169 <sup>95</sup>
10-4CD 10m, 4 el, 16' boom, 10 db .....	349.00	249 <sup>95</sup>
FEN-3 10m, 3 el, 8' boom, 8 db .....	189.00	149 <sup>95</sup>

## MULTIBAND VERTICAL ANTENNAS

AV-80 75/80m 36' vertical antenna ....Dfv	\$444.00	299 <sup>95</sup>
AP-8A 80-10m 8-band rugged vert ....Dmwf	289.00	229 <sup>95</sup>
APR-18A Radial kit .....	70.00	64 <sup>95</sup>
R-7 40/30/20/17/15/12/10m vertical ....Dmw	510.00	329 <sup>95</sup>
R-7000 40/30/20/17/15/12/10m vertical ....	510.00	379 <sup>95</sup>
R-80 80m kit for R-7000 .....	155.00	129 <sup>95</sup>

## ROTATABLE DIPOLES

J-3 20/15/10m World Ranger dipole .....	\$250.00	199 <sup>95</sup>
J-3W 30/17/12m rotatable dipole .....	250.00	199 <sup>95</sup>
J-4 40/20/15/10m World Ranger dipole .....	340.00	269 <sup>95</sup>
J-40 40m World Ranger dipole .....	305.00	239 <sup>95</sup>

## BIG THUNDER TRI-BAND BEAMS

(-9 20/15/10m, 9 el, 28' boom, 13/14db .....	\$995.00	749 <sup>95</sup>
(-7 20/15/10m, 7 el, 18' boom, 12.5/13db ..	675.00	499 <sup>95</sup>

## CUSHCRAFT - continued

### MULTIBAND BEAM ANTENNAS

A-3S 20/15/10m, 3el, 14'bm, 8db, stainless hdwr	\$497.00	349 <sup>95</sup>
A-3SDX 20/15/10m 3el transport beam ...Dm	566.50	399 <sup>95</sup>
A-743 40m or 10 MHz add-on kit; A-3/A-3S	159.00	129 <sup>95</sup>
A-4S 20/15/10m, 4el, 18'bm, 9db, stainless hdwre	597.00	429 <sup>95</sup>
A-744 40m or 10 MHz add-on kit; A-4/A-4S	159.00	129 <sup>95</sup>
A-3WS 17 & 12m, 3 el, 14' boom, 8 db .....	390.00	289 <sup>95</sup>
A-103 30m add-on kit for A-3WS .....	159.00	129 <sup>95</sup>
ASL-2010 13.5-32MHz 8el 18' bm 6.4db LP .	828.00	599 <sup>95</sup>
AFB-2 160-10m 9-band balun ....Dmwf	60.00	29 <sup>95</sup>

### LIGHTNING ARRESTORS

LAC-2 SO-239/SO-239 coax arrestor ..Dmwf	\$ 13.95	
LAC-4 200w SO-239 gas tube arrestor .....	43.95	
LAC-4H 2kw SO-239 gas tube arrestor .....	48.95	
LAC-4N 200w type N gas tube arrestor .....	55.95	
LAC-4NH 2kw type N gas tube arrestor .....	60.95	
LC-2 Extra 200w cartridge for LAC-4/4N .....	19.95	
LC-2KW Extra 2kw cartridge for LAC-4H/4NH	21.95	
5VB Vinyl connector boots .....pack of 5	13.95	

## DCI (DCI)

145-2H 2m 144-146MHz 200w bandpass filter	\$ 89.95	
146-4H 2m 144-148MHz 200w bandpass filter	89.95	
223.5-3H 2m 222-224MHz 200w bandpass filter	89.95	
2m/220 models w/N connectors add \$10 special order		
435-10C 430-440MHz 200w N bandpass filt	109.95	
445-10C 440-450MHz 200w N bandpass filt	109.95	

## DC SALES (DCS)

Tenna Hitch Antenna mount for trailer hitch	\$ 35.95	
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## DAIWA (DAI)

CS-201 2-position 600 MHz coax switch .....	\$ 19.95	
CS-401 4-position 800 MHz coax switch .....	119.95	
CN-101 1.8-150MHz SWR/power meter/light	89.95	
CN-103M 140-525MHz SWR/power meter .....	99.95	
CN-410M 3.5-150MHz 15/150w mob meter ..	89.95	
CN-460M 140-450MHz 15/150w mob meter .	89.95	
CN-465M 140-450MHz 15/75w mobile meter	89.95	
DP-810 1.8-150MHz digital SWR/power .....	244.95	229 <sup>95</sup>
DP-820 140-525MHz dig SWR/power .Dmwf	315.95	249 <sup>95</sup>
DP-830 1.8-150/140-525 dig SWR/pwr Dmwf	349.95	319 <sup>95</sup>

## DAVIS (DAV)

7400 Perception II indoor WX unit .....	\$150.00	129 <sup>95</sup>
7415 Wizard II-S weather station .....	150.00	129 <sup>95</sup>
7425 Wizard III weather station .....	195.00	169 <sup>95</sup>
7440 Monitor II weather station .....	395.00	349 <sup>95</sup>
7852 Rain Collector II, 0.01" .....	75.00	69 <sup>95</sup>
7977 Electronic rain counter, 0.01" .....	30.95	
7859 External temp/humd Sensor II; 7440	125.00	109 <sup>95</sup>
7862 Weatherlink IBM interface/software...	165.00	139 <sup>95</sup>
7866 Weatherlink Mac interface/software ..	165.00	139 <sup>95</sup>
7867 Weatherlink IBM conversion kit .....	40.95	
7868 Weatherlink Mac conversion kit .....	40.95	
7870 Modem adapter for 7862/7866 .....	6.95	
7873 Cig lighter power cord .....	9.95	
7876-040 4-conductor 40' extension cable	18.95	
7878-040 6-conductor 40' extension cable	22.95	
7880 8-conductor 25' junction box cable ..	15.95	
7881 8-conductor 50' junction box cable ..	25.95	
7882 8-conductor 100' junction box cable	45.95	
7890 Mast mount for anemometer .....	16.95	
0131 Weather forecasting quick reference card	9.95	
0271 Turbo Meter handheld dig wind indicator	165.00	99 <sup>95</sup>
0281 Wind Wizard handheld wind indicator ..	44.95	
7520 Stand alone 0.01" rain gauge/elec ctr Dm	95.00	59 <sup>95</sup>

## DELORME (DEL)

Tripmate Laptop PC GPS w/Street Atlas soft	\$ 149.95	
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## DIAMOND (DIA)

### SWR/POWER METERS

SX-100 1.6-60 MHz 30/300/3kw PEP meter ..	\$159.95	149 <sup>95</sup>
SX-200 1.8-200 MHz 5/20/200w PEP meter ..	119.95	109 <sup>95</sup>

## DIAMOND - continued

SX-400 140-525 MHz 5/20/200w PEP meter .	139.95	129 <sup>95</sup>
SX-600 Dual band 1.8-160/140-525 200w PEP mtr .	199.95	179 <sup>95</sup>
SX-1000 1.8-160/430-1300MHz 200w PEP meter	269.95	249 <sup>95</sup>

### HT & HANDHELD SCANNER ANTENNAS

RH-3 2m/440 1.75" BNC mini HT duck .....	\$ 34.95	
RH-77CA 2m/440 15" BNC rubber gain ant ..	34.95	
RH-205 2m 3/4 wave telescopic HT antenna ...	27.95	
RH-519 2m/440 8.3" flexible BNC whip .....	34.95	
RH-707 2m/440 8 3/4" tilttable BNC whip .....	37.95	
RH-951S 2m/440/1.2GHz 15" BNC slim duck	57.95	
SRH-519 2m/440 8.3" flexible SMA whip .....	34.95	
SRH-805 2m/440/1.2GHz 1.75" SMA ant .....	29.95	
SRH-815 2m/440/1.2GHz 6" flex SMA whip ..	44.95	

### MONO-BAND MOBILE ANTENNAS

NR-2C 2m 4.1db 55.5" mobile antenna .....	\$ 44.95	
NR-124 1.2GHz 8.4db 25" type N mobile ant	66.95	
NR-140A 220 4db 37" mobile antenna .....	60.95	
SG-2000A 2m 5.2db 62" mobile antenna .....	89.95	
SG-2000HD 2m 5.2db 62.6" 250w mob ant ..	89.95	
SG-600NMO 6m 2.15db 39" NMO mobile ....	84.95	

### DUAL-BAND MOBILE ANTENNAS

CR-214S 2m/220 2.1/3.4db 37" mobile ant .	\$ 62.95	
CR-224A 2m/220 5/6db 69" mobile antenna	109.95	99 <sup>95</sup>
NR-72BNMO Black 2m/440 2.15db 14" NMO	46.95	
NR-73BNMO Blk 2m/440 2.15/5.5db 34" NMO	62.95	
NR-770HA 2m/440 3/5.5db 40" mobile ant ..	62.95	
NR-770HB Black 2m/440 3/5.5db 40" mobile	64.95	
NR-770HNM 2m/440 3/5.5db 40" NMO mobile	64.95	
NR-770HBNMO Blk 2m/440 3/5.5db 40" NMO	66.95	
NR-770RA 2m/440 3/5.5db 39" mobile ant ..	62.95	
NR-770SA 2m/440 2.15db 16.5" mobile ant .	41.95	
NR-790A 2m/440 4.5/7.2db 57" mobile ant .	94.95	89 <sup>95</sup>
SG-7000A 2m/440 2.15/3.8db 19" mobile ....	73.95	
SG-7200NMO 2m/440 3.2/5.7db 38" NMO ant	88.95	
SG-7500A 2m/440 3.5/6db 41" mobile ant ...	86.95	
SG-7500NMO 2m/440 3.5/6db 41" NMO ant ..	88.95	
SG-7900A 2m/440 5/7.6db 62" mobile ant ...	124.95	114 <sup>95</sup>
TG-509 2m/440 2.1/5.5db 34" glass m ....Δv	199.95	129 <sup>95</sup>

### TRI-BAND MOBILE ANTENNAS

CR-320A 2m/220/440 2.15/3.8/5.5db 36" ....	\$ 98.95	93 <sup>95</sup>
CR-627B 6m/2m/440 2.15/4.5/7.2db 60" ant	109.95	99 <sup>95</sup>
CR-627BNMO 6m/2m/440 2.15/4.5/7.2db 60"	109.95	99 <sup>95</sup>
MV-3A 10/6/2m 57" UHF base mobile ant ....	84.95	
HVC-7 40m loading coil for MV-3A .....	39.95	
HVC-14 20m loading coil for MV-3A .....	39.95	
HVC-18 17m loading coil for MV-3A .....	39.95	
HVC-21 15m loading coil for MV-3A .....	29.95	
NR-2000NA 2m/440/1.2 3/6/9.7db 39" N mob	92.95	89 <sup>95</sup>

### D-505 Mobile 40-1500MHz 20db receive ant

	119.95	
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### MAGNET MOUNTS

DP-SPM/58U Mag mt w/RG-58U; 45" max ....	\$ 43.95	
DPK-4NM-M Hvy mag mt, Yaesu N, 45" max	49.95	
DPK-4NM-N Hvy dty mag mt, cbl, N, 45" max	49.95	
K-702M Hvy duty mag mt, 6 1/2" dia, 50" max	49.95	
MCR-M Mag mt HT base w/coax/tiltable BNC	44.95	
SPM-35 Hvy duty mag mt, cable, 45" max ....	44.95	

### TRUNK LIP MOUNTING KITS

K-200 Folding hatch/tkn mt; NR/SG ants .....	\$ 39.95	
K-200KM Folding hatch/tkn mt/coax; NR/SG .	69.95	
K-400 Hatch/trunk mt; NR/SG antennas .....	39.95	
K-400C Hatch/trunk mt w/coax; UHF mount .	69.95	
K-400CNMO Hatch/trunk mt w/coax; NMO mt	69.95	
K-400-3/8C Trunk mount w/6" cable; 3/4-24 ...	69.95	
C-110 10' extension cable for K-400-3/8C	14.95	
K-600M Tilt angle trunk mt w/cable .....	69.95	
K-600N Tilt angle tnk mt w/N/cable .....	74.95	59 <sup>95</sup>
K-600P Tilt angle trunk mt w/cable, Yaesu N	72.95	
K-601M SO-239 hideaway trunk mt, 6' coax .	69.95	
K-601NMO NMO hideaway trunk mt, 6' coax .	69.95	
C-110 10' extension cable for K-601 mts ..	14.95	
K-9000LRM Motorized luggage rack mount ..	109.95	
K-9000TM Motorized trunk/hatchback mt .....	109.95	



# PRICE LIST

## DIAMOND - continued

### GUTTER MOUNTS & KITS

K-300	Folding gutter mt; NR/SG antennas	\$ 39.95	
K-300C	Gutter mt w/cable; UHF mount	69.95	
K-300KM	Folding gutter mt w/coax; NR/SG	67.95	
K-300M	Gutter mt w/coax; NR/SG ants .Dmwf	79.95	49 <sup>95</sup>

### MIRROR & LUGGAGE RACK MOUNTS & KITS

K-540	Mirror/luggage rack mount	\$ 39.95	
K-540KM	Mirror/luggage rack mt w/coax	67.95	
K-550	Luggage mt; new mini vans (use GLP)	49.95	
K-550KM	Luggage mt w/50-239 base/coax	69.95	

### MOUNTING GROUP HARDWARE

C-101	SO-239 mt, 6.5' RG-316 low-loss coax	\$ 29.95	
C-101NMO	NMO mt, 6.5' RG-316 low-loss coax	29.95	
C-110	10' ext cable; C-101/K-601/K-400-3/8C	14.95	
C-110BNC	10' extension cable to BNC male	22.95	
C-211	SO-239 mt, 6.5' coax, 10' coax extend	39.95	
C-213	SO-239 mt, 13.5' RG-316 low-loss coax	37.95	
GLP-5	UHF base mtg group hrdwr; mini coax	10.95	
GLP-5N	UHF mtg grp hrdwr; mini coax, Yae N	13.95	
GLP-58	UHF base mounting group hardware	10.95	
NMO-UHF	Adapter to NMO; not for SG, 45" max	23.95	

### MONO-BAND BASE STATION ANTENNAS

DP-GH62	6m 6db 21' base antenna	\$157.95	147 <sup>95</sup>
F-22A	2m 6.7db 10.5' base antenna	114.95	104 <sup>95</sup>
F-22J	143.5-146.5MHz 6.7db 10.5' base ant	114.95	104 <sup>95</sup>
F-23A	2m 7.8db 15' base antenna	172.95	162 <sup>95</sup>
F-23C1	148-154MHz 7.8db 15' comm base	183.95	159 <sup>95</sup>
F-23J	143.5-146.5MHz 7.8db 15' base ant	172.95	159 <sup>95</sup>
F-142A	220 MHz 5.5db 6' base antenna	136.95	124 <sup>95</sup>
F-718A	440 11.5db 15' type N base antenna	246.95	226 <sup>95</sup>
F-718C2	460-472MHz 11.5db 15' N comm	261.95	239 <sup>95</sup>
F-718J	428-442MHz 11.5db 15' N base ant	246.95	226 <sup>95</sup>
F-718L	420-430MHz 11.5db ATV N base ant	246.95	219 <sup>95</sup>
F-1230A	1.2GHz 13.5db 10.5' type N base ant	178.95	164 <sup>95</sup>

### DUAL-BAND BASE STATION ANTENNAS

U-200	440/1.2GHz 8.3/11.7db 6' N base ant	\$141.95	129 <sup>95</sup>
U-300A	440/1.2 8.6/13.2db 8.3' N base Δmv	178.95	129 <sup>95</sup>
X-50A	2m/440 4.5/7.2db 5.6' base antenna	125.95	115 <sup>95</sup>
X-50NA	2m/440 4.5/7.2db 5.6' base N ant	129.95	119 <sup>95</sup>
X-200A	2m/440 6.8db 8.3' base antenna	167.95	157 <sup>95</sup>
X-300A	2m/440 6.5/9db 10.2' base ant	183.95	173 <sup>95</sup>
X-500HNA	Hvy duty 2m/440 8.3/11.7db 17.8' N ant	269.95	249 <sup>95</sup>
X-510MA	2m/440 8.3/11.7db 17.2' base ant	219.95	199 <sup>95</sup>
X-510NA	2m/440 8.3/11.7db 17.2' type N ant	219.95	199 <sup>95</sup>
X-510NJ	143.5-146.5/428-442MHz 17.2' N	219.95	189 <sup>95</sup>
X-700HNA	2m/440 9.3/13db 24' type N ant	439.95	369 <sup>95</sup>
X-2200A	2m/220 6/7.8db 11.5' base ant	183.95	173 <sup>95</sup>

### TRI-BAND BASE STATION ANTENNAS

D-130J	25-1300 MHz 200w discone ant	\$101.95	94 <sup>95</sup>
U-5000A	2m/440/1.2GHz 4.5/8.3/11.7db 6' N	167.95	157 <sup>95</sup>
V-2000A	52-54MHz/2m/440 2.1/6.2/8.4db 8.3'	172.95	162 <sup>95</sup>
X-3200A	2m/220/440 6/7.8/8db 10' base	241.95	221 <sup>95</sup>
X-6000A	2m/440/1.2 6.5/9/10db 10.5' N	219.95	199 <sup>95</sup>
D-707E	Base 40-1500MHz 20db receive ant	179.95	

### DUPLEXERS & TRIPLEXERS

MX-37	HF-440/1.2 100/50w N duplexer	\$ 74.95	
MX-37N	HF-440/1.2 100/50w N dplx .Dmwf	60.95	49 <sup>95</sup>
MX-62M	HF-6m/2m, 12" cables duplexer	77.95	
MX-72D	HF-2m/440 400/150/100w duplexer	52.95	
MX-72DN	As MX-72D/type N on 440 ...Dmwf	52.95	
MX-72H	As MX-72D, w/12" cables	58.95	
MX-72N	As MX-72D, type N on 440, 12" cables	58.95	
MX-214	2m/220 150/100w w/12" cables	73.95	
MX-214D	As MX-214, no cables	73.95	
MX-324	2m/220/440 triplexer	99.95	94 <sup>95</sup>
MX-324D	As MX-324, no cables	99.95	94 <sup>95</sup>
MX-2000	HF-6m/2m/440 400/400/250w triplexer	94.95	89 <sup>95</sup>
MX-2000D	As MX-2000, no cables	99.95	94 <sup>95</sup>
MX-3000	HF-2m/440/1.2 400/200/100w triplexer	94.95	89 <sup>95</sup>
MX-3000D	As MX-3000, no cables	89.95	
MX-3000N	As MX-3000, type N, 12" cables	94.95	89 <sup>95</sup>

## DIAMOND - continued

### ACCESSORIES

CA-35R	DC-500MHz 400w lightning protect	\$ 36.95	
CX-210A	1.5kw DC-1000MHz coax switch	51.95	
CX-210N	1.5kw DC-1500MHz N coax switch	93.95	89 <sup>95</sup>
CX-310A	HD 3-pos DC-800MHz coax switch	89.95	
DL-30A	15/100w peak 0-500MHz dummy load	33.95	
HB-100	Desk mount bracket for HT	44.95	29 <sup>95</sup>
HB-300	Remote head mount for Xcvt	74.95	
HB-400	HT air vent dash mount	19.95	
HB-450	HT adjustable air vent dash mount	69.95	
HB-500	Remote head air vent dash mount	22.95	
HB-650	HT door mt; side window/glove box	69.95	

## Diamond Systems (DSY)

### IBM LICENSE COURSE; THEORY/REGULATIONS/CODE

DSI-IBM-N	Novice Class License software	\$ 49.95	39 <sup>95</sup>
DSI-IBM-T	Technician Class License software	44.95	34 <sup>95</sup>
DSI-IBM-NC	No Code Tech Class License software	59.95	49 <sup>95</sup>
DSI-IBM-G	General Class License software	44.95	34 <sup>95</sup>
DSI-IBM-A	Advanced Class License software	59.95	49 <sup>95</sup>
DSI-IBM-E	Extra Class License software	59.95	49 <sup>95</sup>

## DIGIMAX (DIG)

D-510A	1 GHz 8-digit counter; 1 PPM ...Dmfv	\$179.95	159 <sup>95</sup>
D-612	1.2 GHz 9-digit counter; 1 PPM Dmwf	259.95	229 <sup>95</sup>
D-1200	1.2GHz 9dig .1PPM ctr/audio multDwf	299.95	269 <sup>95</sup>
AC-12	12vdc adaptor	8.95	
B-12	Dry cell holder, switch; D-612 Dmwf	10.95	6 <sup>95</sup>
BAC-5	Nicad pack; r D-500/D-510A Dmwf	29.95	19 <sup>95</sup>
BAC-12	Nicad pack; D-612/D-1200 Dmwf	34.95	24 <sup>95</sup>
RF-500X	Inline RF sampler, 250w ...Dmwf	39.95	
T-1200	21" BNC telescopic antenna Dmwf	8.95	

## DRAKE (DRA)

TR-270	25w 2m FM Xcvt/ps/440 rcvr/TTP	\$999.95	
DEM0D-270	Multimode demodulator kit	99.95	
TNC-270	9600 bps terminal node controller	249.95	
R-8A	Shortwave receiver	1099.00	1079 <sup>95</sup>
R-8B	Shortwave receiver	1199.95	
MS-8	1592 Speaker	49.95	
1590	35-55, 108-174 MHz VHF converter	219.95	
7851	R-8A technical manual	39.95	
1591	Interface computer soft; R-8	59.00	9 <sup>95</sup>
SW-8	Shortwave receiver	799.95	
1595	Carrying case for SW-8	49.95	
SW-1	Shortwave receiver	299.00	249 <sup>95</sup>
SW-2	Shortwave receiver	499.95	
MS-8	1592 Speaker for SW-2	49.95	
1334	Mobile mount kit for SW-1/SW-2	15.95	
1594	Remote control for SW-2	49.95	
2051	Tilt/carry handle for SW-1/SW-2	4.95	

## EASY-UP (UPS OK) (EAS)

EZ 48-3ABX	3' boxed tripod w/pitch pad kit	\$ 24.95	
EZ 48-5ABX	5' boxed tripod w/pitch pad kit	34.95	

## EDCO (EDC)

TX-146	2m 50w 40db 3-stage helical filt Dm	\$ 89.95	49 <sup>95</sup>
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## EIMAC TRANSMITTING TUBES (EIM)

3CX800A7	.....special order	\$499.95	
3CX1200A7	.....special order	669.95	
4CX250B/7203	.....special order	159.95	
8873	.....special order	489.95	
8874/3CX400A7	.....special order	469.95	
8875	.....special order	599.95	
8877/3CX1500A7	.....special order	1099.95	

### ALSO see TUBES

## FORBES GROUP (FOR)

VT-14	2m Ventenna 3' 2.6 db base ant	\$ 49.95	
VT-15S	Scanner Ventenna 3' 2.6 db base	49.95	
VT-22	220 Ventenna 25" 2.6 db base ant	49.95	
VT-27	2m/440 Ventenna base antenna	74.95	
VT-44	440 Ventenna 14" 2.6 db base ant	49.95	

## Gamber-Johnson (GAM)

SS-100	Super slide mount w/ant plug	\$100.22	69 <sup>95</sup>
SS-101	Extra base for SS-100	42.95	

## GAP VERTICALS (GAP)

DX-VIII	Challenger 80/40/20/15/12/10/6/2m 31.5'	\$259.95	
Challenger	Counterpoise	25.95	
(SYN) 100'	3/4" black double braided rope	6.95	
DX-VI	Eagle 40/20/17/15/12/10m 21.5' rigid	269.95	
DX-IV	Voyager 160/80/40/20m 45'; use 350' guy	399.95	
Voyager	Counterpoise	50.95	
(SYN) 350'	3/4" black double braided rope	39.95	
Titan DX	80/40/30/20/17/15/12/10m, 25'	299.95	
100' Guy Kit	with clamp	14.95	
200' Guy Kit	with clamp	22.95	

## GARMIN (GAR)

GPS-12XL	GPS receiver	\$386.35	299 <sup>95</sup>
GPS-38	GPS receiver	231.80	179 <sup>95</sup>
GPS-III	GPS handheld mapping unit	571.80	419 <sup>95</sup>

## GENESYS (GEN)

ADP-1	Chrome NMO to SO-239 adapt	Δw	\$ 17.95
B-27	2m/440 7" duck	Δmw	19.95
B-35	2m/440 15" duck	Δmwv	27.95
CT-221E	Eartalk mic/amp/gain controls	Δf	84.95
CT-221ME	Eartalk w/split plugs	Δw	84.95
G-1	43" 3/6db 2m/440 base antenna	Δf	99.95
NMO Mount	NMO mount w/16' mount	Δwfv	10.95
PO Mount	SO-239 mount w/16' coax	Δf	17.95
QS-110	Sprk/mic; Alinco/lcom/Yaesu	Δmw	29.95
QS-110K	Speaker/mic for Kenwood	Δmwv	29.95
RS-402	5/20/200w 125-525 SWR/pwr	Δmwfv	139.95
SY-25D	VHF/UHF duplexer	Δw	34.95
T-05	Throat mic with split plugs	Δmv	84.95
T-05K	Throat mic for Kenwood	Δmwfv	84.95
T-05M	Throat mic for Motorola	Δmv	92.95

## GLEN MARTIN (GME)

RT-424	4.5' roof-top tower, 6 sq ft 85 mph	\$159.95	
RT-832	8' roof-top tower, 8 sq ft 85 mph	229.95	
RT-936	9' roof-top tower, 18 sq ft 85 mph	389.95	
RT-1832	17.5' roof-top tower, 12 sq ft 85 mph	524.95	
LB-3755	Set of 8 3/4" x 5" lag bolts	9.95	
RA-6024	24" side arm for roof tower	59.95	
RA-6048	48" side arm for roof tower	76.95	
M-1330A	30' alum twr 12 sq ft/Hazer/10' mast T	1615.95	
M-1340A	40' alum twr 12 sq ft/Hazer/10' mast T	1832.95	
M-1840A	40' alum twr 16 sq ft/Hazer/10' mast T	2150.95	
M-1850A	50' alum twr 16 sq ft/Hazer/10' mast T	2410.95	
M-1860A	60' alum twr 15 sq ft/Hazer/10' mast T	3356.95	
M-1870A	70' alum twr 15 sq ft/Hazer/10' mast T	3660.95	
KB-1000	57" side arm; M-13 series	81.95	
KB-1300	57" side arm; M-18 series	81.95	
LR-8400	Lightning rod kit (complete)	148.95	
CW-2540	25' #4 bare copper ground wire	19.95	
CW-5040	50' #4 bare copper ground wire	38.95	
CW-7540	75' #4 bare copper ground wire	57.95	
CW-1040	100' #4 bare copper ground wire	76.95	
CW-1240	125' #4 bare copper ground wire	95.95	
CW-1540	150' #4 bare copper ground wire	115.95	
MC-10	Mast clamp; 2 required	24.95	
ES-40	4" dia x 30" earth screw	15.95	
ES-60	6" dia x 48" earth screw	25.95	
ES-80	8" dia x 66" earth screw	57.95	
GR-4400	Ground rod wire clamp	6.95	
GR-5080	8' x 5/8" ground rod	19.95	
H-2	175 lb load 12 sq ft HD aluminum Hazer	359.95	
H-3	150 lb load 8 sq ft std aluminum Hazer	269.95	
H-4	200 lb load 16 sq ft galv steel Hazer	344.95	
BW-8001	Brake winch for H-2/3/4	73.95	
HR-2040	Roller bearing set; H-2/3/4	59.95	
HR-6010	T'X plates for H-2/4/5/6	21.95	
HR-6040	Bearing block set; H-5/6	44.95	



## GLEN MARTIN - continued

Reg Sale

HS-1301 Side arm for H-2/3/4/5 .....	44.95
HP-3000 Kevlar guy cable, 3000# .....	per ft .95
HP-4500 Kevlar guy cable, 4500# .....	per ft 1.49
M-1049 9' 1.92" OD galv steel mast .....	58.95
MA-1040 10' 1.92" OD aluminum mast .....	74.95
MA-1049 9' 1.92" OD aluminum mast .....	68.95
MA-1050 5' 1.92" OD aluminum mast .....	55.95
MA-2069 9' 2.376" OD aluminum mast .....	99.95
MA-5050 5' 1.33" OD aluminum mast .....	36.95
ML-1800 Messenger line kit; Glen Martin towers .....	69.95
ML-2500 Messenger line kit; Rohn towers .....	69.95
TB-25 Thrust bearing (2 sealed bearings) ....	89.95
TB-3806 3/4" x 6" galv turnbuckle .....	15.95
TB-5009 1/2" x 9" galv turnbuckle .....	19.95
TB-6212 3/4" x 12" galv turnbuckle .....	35.95
TL-0470 Terminal lug .....	2.95
VH8-60 Hazer - for 60' Rohn 45G .....	1350.95
VH8-70 Hazer - for 70' Rohn 45G .....	1455.95
VH9-50 Hazer - for 50' Rohn 55G .....	1265.95
VH9-60 Hazer - for 60' Rohn 55G .....	1385.95
VH9-70 Hazer - for 70' Rohn 55G .....	1490.95

All GLEN MARTIN items are shipped PREPAID (Glen Martin's expense) direct to you from the factory (48 states). We prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your order. Please allow sufficient delivery time. Most truck lines will not unload towers, so please be sure to have enough manpower and/or equipment on hand.

## L.L. GRACE (GRA)

KCT Kansas City Tracker satellite package ...	\$229.95
KCT/T Kansas City Tracker package/KC Tuner	319.95

## GROVE (GRV)

ANT-20 No-Tenna Inside car rcv ant .....	Δmwfv \$19.95	14 <sup>95</sup>
BOK-16 Listener's Lawbook .....	Δmv 9.95	
BOK-104 Antenna Factbook .....	Δmwfv 9.95	

## GRUNDIG (GRU)

Cosmopolit Port AM/FM/SW/LW Rcvr .....	Df \$249.95	119 <sup>95</sup>
Traveller II Port AM/FM/SW/LW Rcvr/clock ....	99.95	69 <sup>95</sup>
Yacht Boy 305 Port AM/FM/SW/LW Rcvr .....	139.95	119 <sup>95</sup>
Yacht Boy 400 Port AM/FM/SW/LW Rcvr .....	219.95	189 <sup>95</sup>
G-400ACA AC adaptor for Yacht Boy 400 †	15.95	9 <sup>95</sup>

## HAL (HAL)

DSP-4100 HF DSP modem .....	Δm 1295.00	999 <sup>95</sup>
P-38 HF DSP modem .....	395.00	349 <sup>95</sup>
PCI-4000/M Multi-mode clover unit; IBM Δm	795.00	599 <sup>95</sup>
ST-8000 HF modem .....	special order 3495.00	3269 <sup>95</sup>

## HEIL (HEI)

PRO-SET-4	Deluxe boom mic/headset/HC-4	..	\$131.95	
PRO-SET-5	Deluxe boom mic/headset/HC-5	..	131.95	
PRO-MICRO-4	Boom mic/headset/HC-4	.....	105.95	
PRO-MICRO-5	Boom mic/headset/HC-5	.....	105.95	
PRO-5-4	Boom mic/single headset (HC-4)	...	120.95	
PRO-5-5	Boom mic/single headset (HC-5)	...	120.95	
AD-1-I	Pro-Set 8-pin adapter cord for Icom		14.99	
AD-1-K	Pro-Set 8-pin adapt cord; Kenwood		14.99	
AD-1-T	Pro-Set 8-pin adapt cord; Ten-Tec	..	14.99	
AD-1-Y	Pro-Set 8-pin adapter cord; Yaesu		14.99	
AD-1-I-M	Pro-Set modular adapt cord; Ico		14.99	
AD-1-K-M	Pro-Set modular adapt cord; Ken		14.99	
AD-1-Y-M	Pro-Set modular adapt cord; Yae		14.99	
BM-5-4-I	Bm mic/sgl headset; Icom (HC4)	..	Dv 69.90	49 <sup>95</sup>
BM-5-4-Y	Bm mic/sgl headset; Yaesu (HC4)	Dmv	69.90	49 <sup>95</sup>
FS-1	Foot switch	.....	26.95	
HS-1	Hand switch	.....	20.95	
HC-4	DX'ers 'dream machine' mic element	..	29.95	
HC-5	Mic element for Icom SM-5/SM-6	.....	29.95	
HM-10-4	Microphone with HC-4 element	.....	63.96	
HM-10-5	Microphone with HC-5 element	.....	63.96	
HM-10-Dual	Mic w/HC-4 & HC-5 elements	...	112.96	
CC-1-I	HM-10 cable for Icom	.....	25.99	

## HEIL - continued

Reg Sale

CC-1-K HM-10 cable for Kenwood .....	25.99
CC-1-Y HM-10 cable for Yaesu .....	25.99
MA-1 Clamp and arm for HM-10 .....	49.99
TB-1 Table base mic stand for HM-10 .....	19.95
Boom Clip for BM-series .....	5.95
Ear Pads for BM-series .....	pair 5.95
Ham Radio Handbook .....	12.95

## HUSTLER (HUS)

RM-80 80m CW 400w PEP resonator .....	\$ 26.95
RM-75 75m phone 400w PEP resonator .....	26.95
RM-40 40m 400w PEP resonator .....	24.95
RM-30 30m 400w PEP resonator .....	24.95
RM-20 20m 400w PEP resonator .....	21.95
RM-17 17m 400w PEP resonator .....	21.95
RM-15 15m 400w PEP resonator .....	15.95
RM-12 12m 400w PEP resonator .....	15.95
RM-11 11m 400w PEP resonator .....	15.95
RM-10 10m 400w PEP resonator .....	15.95
RM-80S 80m CW 2kw PEP resonator .....	49.95
RM-75S 75m phone 2kw PEP resonator .....	49.95
RM-40S 40m 2kw PEP resonator .....	35.95
RM-20S 20m 2kw PEP resonator .....	28.95
RM-15S 15m 2kw PEP resonator .....	24.95
RM-11S 11m 2kw PEP resonator .....	23.95
RM-10S 10m 2kw PEP resonator .....	23.95
MO-1 54" mast for fender or deck mount ....	31.95
MO-2 54" mast for bumper mount .....	31.95
MO-3 54" no break-over mast .....	23.95
MO-4 22" mast for special applications .....	19.95
VP-1 Tri-band adapter .....	5.95
RSS-2 Resonator spring .....	9.95
QD-2 Stainless quick disconnect .....	19.95
L-14-144 12' RG-58, PL-259 to lugs .....	9.95
L-14-240 20' RG-58, PL-259 to lugs .....	12.95

## STAINLESS 2" MOBILE BALL MOUNTS

SSM-1 Ball & spring, cadmium hardware .....	\$ 46.95
SSM-2 Ball, cadmium hardware .....	26.95
SSM-3 Stainless steel spring .....	24.95
<b>1-1/2" MOBILE BALL MOUNTS</b>	
C-32 Chrome plated ball .....	\$ 11.95
C-30 Chrome plated spring .....	11.95
C-29 Stainless steel spring .....	17.95
BM-1 Single strap bumper mt w/C-32 .....	21.95

## 3/8-24 THREAD MOBILE MOUNTS

HLM Trunk lip mount w/swivel .....	\$ 22.95
HOT Hustloff trunk lip mt w/swivel .....	23.95
MBM Super magnet mount w/16' coax .....	19.95
MM-3 Universal mount with 17' coax .....	21.95
RVM Recreational vehicle mount .....	20.95
TGM-1 Trunk grove mount .....	12.95
TLM Trunk lip mount .....	21.95

## HF ANTENNAS

4-BTV	40/20/15/10m 21' trap vertical .....	\$166.95	119 <sup>95</sup>
5-BTV	80/40/20/15/10m 25' trap vertical ....	211.95	149 <sup>95</sup>
30-MTK	30m trap kit for 4-BTV/5-BTV .....	41.95	
6-BTV	80/40/30/20/15/10m 24' trap vert .....	246.95	179 <sup>95</sup>

## VHF/UHF BASE STATION ANTENNAS

G6-144B 2m 6 db 10' vertical antenna .....	\$149.95	114 <sup>95</sup>
G6-270R 2m/440 6db 7.6' base station ant .	209.95	159 <sup>95</sup>
G7-144 2m 7 db 15' vertical antenna .....	209.95	159 <sup>95</sup>
G7-220 220 MHz 7 db 10' vertical antenna ..	199.95	149 <sup>95</sup>
G6-440 440 MHz 6 db 7' vertical antenna ...	186.95	139 <sup>95</sup>

## BUSINESS BAND ANTENNAS

G7-150-1 7db 148-156 MHz base ant .....	Δf \$229.95	99 <sup>95</sup>
G7-150-2 7db 154-161 MHz base ant .....	Δm 229.95	99 <sup>95</sup>
G7-150-3 7db 161-168 MHz base ant .....	Δmwf 229.95	99 <sup>95</sup>
G7-150-4 7db 167-174 MHz base ant .....	Δmwf 229.95	99 <sup>95</sup>
G6-450-1 6db 450-458 MHz base ant .....	Δmwf 209.95	99 <sup>95</sup>
G6-450-2 6db 456-464 MHz base ant .....	Δmf 209.95	99 <sup>95</sup>
G6-450-3 6db 462-470 MHz base ant .....	Δwf 209.95	99 <sup>95</sup>
G6-450-4 6db 470-478 MHz base ant .....	Δmwf 209.95	99 <sup>95</sup>

## HUSTLER - continued

Reg Sale

<b>SPIRIT VHF/UHF BASE ANTENNAS (Special Order)</b>		
HSU-14448 144-148 unity gain base ant .....	*T \$400.00	219 <sup>95</sup>
HS3-14448 144-148MHz 3db base ant .....	*T 495.00	319 <sup>95</sup>
HX6-14448 144-148 extreme HD 6db base .....	*T 1209.00	899 <sup>95</sup>
HS6-43050 430-450MHz 6 db base ant .....	*T 697.00	379 <sup>95</sup>
HD9-43050 430-450MHz HD 9db base ant .....	*T 882.00	499 <sup>95</sup>
HX10-43050 430-450 extreme HD 10db ant .....	*T 998.00	759 <sup>95</sup>
HS6-12430 1.2-1.3GHz 6 db base ant .....	*T 485.00	319 <sup>95</sup>
HS9-12430 1.2-1.3GHz 9 db base ant .....	*T 766.00	419 <sup>95</sup>
HS10-12430 1.2-1.3GHz 10 db base ant .....	*T 860.00	519 <sup>95</sup>
HS12-12430 1.2-1.3GHz 12 db base ant .....	*T 965.00	529 <sup>95</sup>

\*Specify exact frequency and height above ground that the Spirit antenna will be mounted above surrounding terrain. These antennas are drop-shipped (shipped direct to you from the Hustler factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mineral Wells, Texas via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.

## VHF MOBILE ANTENNAS

BBL-144A	2m FM ¾" hole mt antenna, 3.4db	\$ 39.95
BBLT-144A	2m FM trunk lip mt ant, 3.4 db ..	47.95
CG-144	2m FM ¾-24 ant, 7' high, 5.2 db .....	31.95
CGT-144	2m FM trunk mt ant, 7' high, 5.2db	51.95
CG-220	220 FM ¾-24 ant, 5.2 db .....	Δmwfv 31.95
CGT-220	220 MHz 5.2 db tnk mt ant .....	51.95
FX-2	2m FM 3.4 db magnetic mt antenna ....	33.95
FX-2B	2m FM 3.4 db black mag mt antenna	38.95
FX-220	220 FM 3.4 db magnetic mt ant .....	33.95
FX-220B	220 FM 3.4 db black mag mt ant ...	38.95
MKR-2	Radial kit for SF-2/CG-144 .....	20.95
RX-2	2m FM 3.4db magnetic mount ant .....	24.95
RX-220	220 FM 3.4db magnetic mt antenna	24.95
RX-440	440 FM 5 db magnetic mt antenna ..	24.95
SF-2	2m FM ¾-24 ant, 4' high, 3.4 db .....	14.95
SF-220	220 MHz ¾-24 antenna, 3 db Δmwfv	14.95
THF	140-500 MHz ¼ wave trunk mount ant ..	23.95
UGM	140-500 MHz ¼ wave BNC mag mt ant	21.95
UHT-1	140-500 MHz ¼ wave roof mt ant .....	14.95

## HY-GAIN (HYG)

### TRI-BAND BEAMS (20-15-10m)

398S TH1DXS 11el 20/17/15/12/10m, 24' bm	1079.95	899 <sup>95</sup>
391S TH7DXS 7 el, 24' boom w/balun .....	811.95	689 <sup>95</sup>
393S TH5Mk2S 5 el, 19' boom w/balun .....	696.43	589 <sup>95</sup>
395S Explorer 14 4 el, 14' boom w/balun ....	538.95	459 <sup>95</sup>
396S QK-710 10MHz or 40m EX add-on ...	165.95	154 <sup>95</sup>
388S TH3Mk4 3 el, 14' boom .....	433.95	369 <sup>95</sup>
221S-1 TH3JRS 3 el, 12' boom, 750w PEP ....	324.95	289 <sup>95</sup>
390S TH2Mk3S 2 el, 6' boom .....	337.95	279 <sup>95</sup>
DB-1217 12/17m 14' boom beam .....	m 401.95	339 <sup>95</sup>

## MONOBAND BEAMS

371S Discoverer 7-1 30 or 40m rotatable dipole	\$263.95	229 <sup>95</sup>
372S Discoverer 7-2 40m 2 el 23' boom .....	601.95	509 <sup>95</sup>
373S Discoverer 7-3 3rd el; 372S; 35' boom	371.95	314 <sup>95</sup>
377S-1 205CA 20m 5 el, 34' boom .....	661.95	559 <sup>95</sup>
394S 204BAS 20m 4 el, 26' boom .....	481.95	399 <sup>95</sup>
226S 203BAS 20m 3 el, 16' boom .....	292.95	249 <sup>95</sup>
376S 155B/CAS 15m 5 el, 26' boom .....	380.95	319 <sup>95</sup>
236S 153BAS 15m 3 el, 12' boom .....	182.95	169 <sup>95</sup>
375S 105B/CAS 10m 5 el, 24' boom .....	251.95	229 <sup>95</sup>
239S-1 103BAS 10m 3 el, 8' boom .....	131.95	124 <sup>95</sup>
1009AA LP-1009AA 13-30 MHz 12 el LP Δm	1321.95	999 <sup>95</sup>
1010AA LP-1010AA 10-30 MHz 14 el LP Δm	1872.95	1449 <sup>95</sup>

## MULTI-BAND VERTICALS

1010AA LP-1010AA 10-30 MHz 14 el LP $\Delta$ m	1872.95	1449 <sup>95</sup>
<b>MULTI-BAND VERTICALS</b>		
188S DX-88 80-10m 8-band 25' vert .....	\$346.95	299 <sup>95</sup>
189S GRK-88 Ground radial kit .....	81.95	
190S RRK-88 Roof radial kit .....	99.95	
191S 160MK-88 160m kit for 188S .....	178.95	159 <sup>95</sup>
DX-77 40-10m 750w 7-band 29' no radials vert	421.95	359 <sup>95</sup>
182S 18HTS Hv-Tower 5-band, 50' high ....T	739.95	629 <sup>95</sup>



# PRICE LIST

## HY-GAIN - continued

	Reg	Sale
LC-160Q 160m loading coil for Hy-Tower ...	94.95	
385S 14AVQ/WBS 40/20/15/10m, 18' .....	159.95	144 <sup>95</sup>
384S 12AVQS 20/15/10m, 13.5' high .....	114.95	104 <sup>95</sup>
184 14RMQ Roof kit-12/14AVQ,18AVT Δmwfv	71.95	39 <sup>95</sup>
193S 18VS 80-10m trapless vert, 18' high ..	74.95	69 <sup>95</sup>

## MULTI-BAND DOUBLET

380S 2BDQS 80/40m 101' trap doublet .....	\$120.95	109 <sup>95</sup>
383S 5BDQS 80/40/20/15/10m 94' trap Δmwfv	235.95	159 <sup>95</sup>
381S 19PD 80-10 233' 1-band port dip Δmwfv	263.95	199 <sup>95</sup>

## VHF/UHF BASE STATION ANTENNAS

343S 66DX 6m 6 el beam, 24' boom .....	\$231.95	209 <sup>95</sup>
230S-1 64DX 6m 4 el beam, 12' boom .....	122.95	109 <sup>95</sup>
232S 215DX 2m 15 el beam, 28' boom Δmwfv	206.95	139 <sup>95</sup>
214S-1 214FM 2m 14 el beam, 15' boom .....	81.95	
208S-1 28FM 2m 8 el beam, 12' boom Δwfv	71.95	59 <sup>95</sup>
205S-1 25FM 2m 5 el beam, 6' boom .....	51.95	
203S-1 23FM 2m 3 el beam, 3.5' boom .....	41.95	
231S 70-31DX 430 31 el bm, 24' bm Δmwfv	203.95	159 <sup>95</sup>
V-6R 6m 3db deluxe base antenna .....	189.95	174 <sup>95</sup>
338 GPG2B 2m ground plane ant .....	43.95	
331S V-42R 2m/440 type N base ant Δmwfv	154.95	129 <sup>95</sup>
335S-1 V-2R 2m ground plane ant .....	99.95	92 <sup>95</sup>
V-3R 220 ground plane antenna .....	101.95	94 <sup>95</sup>
337S-1 V-4R 440 ground plane ant .....	97.95	89 <sup>95</sup>

## OSCAR LINK ANTENNAS

216S 216SAT 2m 16el 145.9MHz bm Δfv	\$218.95	159 <sup>95</sup>
215S 7030SAT 435 MHz 30 el beam Δfv	211.95	149 <sup>95</sup>
217 60" x 1 1/2" fiberglass crossboom Δfv	71.95	49 <sup>95</sup>
218S OSCAR Link Complete Oscar ant sys ...	487.95	409 <sup>95</sup>

## ACCESSORIES

155 CI Center insulator for doublets .....	\$ 12.95	
156 EI 7" doublet end insulators .....	pair 6.95	
157S CIC Dipole center insulator w/SO-239	23.95	
242S BN-86 80-10m balun .....	36.95	
243S BN-4000B 4kw PEP 160-10m beam balun	93.95	89 <sup>95</sup>
244S BN-4000D 4kw PEP 160-10m dipole balun	93.95	89 <sup>95</sup>
2400-155 62400155 Boom mic/headset Δmwfv	113.95	89 <sup>95</sup>

## HY-GAIN CRANK-UP TOWERS

129-1 HG-37SS 37' self-supporting tower .T	1557.95	1299 <sup>95</sup>
125-1 HG-52SS 52' self-supporting tower .T	2565.95	2129 <sup>95</sup>
130-1 HG-54HD 54' hvy duty self-support .T	3171.95	2629 <sup>95</sup>
131-1 HG-70HD 70' hvy duty self-support .T	4574.95	3799 <sup>95</sup>
116 HG-5 5' 2" OD .120 wall steel mast .....	79.95	
117 HG-10 10' 2" OD .120 wall steel mast †Tw	102.95	49 <sup>95</sup>
118 HG-15 15' 2" OD .120 wall steel mast T	165.95	154 <sup>95</sup>
121B HG-TB Thrust bearing w/sleeve .....	88.95	
122 HG-COA Coax arm*, tower legs 1"-1 1/2"	23.95	

\*One required per section

140 HG-TOA Tilt-over 'gin-pole' .....	T 742.95	649 <sup>95</sup>
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Hy-Gain Crank-Up Towers are drop-shipped (shipped direct to you from the Hy-Gain factory). On these drop-shippings we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Lincoln, Nebraska via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient delivery time. Most truck lines will not unload the tower, so please be sure to have enough manpower and/or equipment on hand.

## HY-GAIN ANTENNA ROTORS

305 AR-40 Solid state light duty rotor .....	\$262.95	239 <sup>95</sup>
302 CD-45-II Medium duty rotor .....	369.95	339 <sup>95</sup>
302-2 CD-45-II 220v medium duty rotor .....	369.95	339 <sup>95</sup>
304 HAM IV Heavy duty rotor .....	529.95	449 <sup>95</sup>
307 HAM V Pathfinder Digital HD rotor .....	899.95	769 <sup>95</sup>
303 T-X Tailtwister extra heavy duty rotor ...	619.95	539 <sup>95</sup>
303-2 T-X 220v Tailtwister extra HD rotor ...	619.95	539 <sup>95</sup>
303D Pathfinder Tailtwister dig extra HD rotor	970.95	839 <sup>95</sup>
300 HDR-300/A Deluxe digital hvy duty rotor	1222.95	1049 <sup>95</sup>
306 DCU-1 Digital rotor control; HAM IV/T/X	619.95	539 <sup>95</sup>

## OPTIONAL ACCESSORIES FOR ROTORS

51467-10 MSHD Lwr mast support; HAM IV/T/X	\$ 81.95	
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## HY-GAIN - continued

51472-10 MSLS Lwr mast support; CD45I/AR40	28.95	
50559-10 TSP-1 Tower spacing kit ....Δmwv	23.95	9 <sup>95</sup>

## See BELDEN for rotor cable

## ICOM (ICO)

IC-781 Xcv/Rcv/ps/tuner/scope ....spec order	8000.00	6599 <sup>95</sup>
FL-103 2.8 KHz SSB filter .....	123.00	109 <sup>95</sup>
UT-36 Voice synthesizer .....	74.95	
IC-775DSP Xcvr/ps/kyer/auto tuner/IF-DSP	4760.00	3999 <sup>95</sup>
CR-282 High stability crystal unit .....	168.00	149 <sup>95</sup>
FL-53A 250 Hz CW filter (2nd IF) .....	245.00	199 <sup>95</sup>
FL-101 250 Hz CW filter (1st IF) .....	133.00	119 <sup>95</sup>
FL-102 6 KHz AM filter .....	94.95	
FL-222 1.9 KHz 455 KHz IF SSB filter .....	249.00	199 <sup>95</sup>
FL-223 1.9 KHz 9 MHz IF SSB filter .....	105.00	99 <sup>95</sup>
FL-232 350 Hz CW/RTTY filter .....	113.00	104 <sup>95</sup>
HM-36 Scanning hand mic .....	74.95	
MB-19 Rack mounting handles .....	74.95	
SM-6 Desk microphone .....	128.00	119 <sup>95</sup>
SM-8 2-connector desk mic/up/down scan	200.00	169 <sup>95</sup>
SP-20 Speaker w/audio filter .....	310.00	249 <sup>95</sup>
SP-21 External speaker .....	138.00	119 <sup>95</sup>
UT-66 Voice synthesizer .....	83.95	
IC-756 Xcvr/Rcvr/6m/IF-DSP/tuner/kyer	2445.00	1999 <sup>95</sup>
PS-85 Switching power supply .....	406.00	299 <sup>95</sup>
AH-3 Automatic antenna tuner .....	816.00	599 <sup>95</sup>
AH-2B Bumper mt & whip .....	379.00	299 <sup>95</sup>
CR-502 High stability oscillator crystal	95.95	
Suggest dealer installation of CR-502		
FL-52A 500 Hz CW filter (2nd IF) .....	245.00	199 <sup>95</sup>
FL-53A 250 Hz CW filter (2nd IF) .....	245.00	199 <sup>95</sup>
FL-100 500 Hz CW filter .....	133.00	119 <sup>95</sup>
FL-101 250 Hz CW filter .....	133.00	119 <sup>95</sup>
FL-222 1.9 KHz 455 KHz IF SSB filter .....	249.00	199 <sup>95</sup>
FL-223 1.9 KHz 9 MHz IF SSB filter .....	105.00	99 <sup>95</sup>
FL-232 350 Hz CW/RTTY filter .....	113.00	104 <sup>95</sup>
SM-8 2-connector desk mic/up/down scan	200.00	169 <sup>95</sup>
SP-20 Speaker w/audio filter .....	310.00	249 <sup>95</sup>
SP-21 External speaker .....	138.00	119 <sup>95</sup>
UT-102 Voice synthesizer .....	74.95	
MB-49 Mobile mounting bracket; IC-738	59.95	
IC-728 Xcvr/SW Rcvr w/mic .....	1500.00	999 <sup>95</sup>
PS-85 Switching power supply .....	406.00	299 <sup>95</sup>
AH-3 Automatic antenna tuner .....	816.00	599 <sup>95</sup>
AH-2B Bumper mt & whip .....	379.00	299 <sup>95</sup>
AT-160 Automatic antenna tuner ....Δmwfv	405.00	249 <sup>95</sup>
CR-64 High stability oscillator crystal .....	156.00	139 <sup>95</sup>
FL-100 500 Hz CW filter .....	133.00	119 <sup>95</sup>
FL-101 250 Hz CW filter .....	133.00	119 <sup>95</sup>
MB-5 Mobile mount .....	59.95	
SM-6 Desk microphone .....	128.00	119 <sup>95</sup>
SP-3 External speaker .....	140.00	124 <sup>95</sup>
SP-7 Small external speaker .....	94.95	
SP-20 Speaker w/audio filter .....	310.00	249 <sup>95</sup>
UI-7 AM/FM module for IC-728 .....	119.00	109 <sup>95</sup>
UT-30 Tone encoder .....	55.95	
IC-707 Xcvr/SW Rcvr w/mic .....	925.00	729 <sup>95</sup>
PS-85 Switching power supply .....	406.00	299 <sup>95</sup>
AH-3 Automatic antenna tuner .....	816.00	599 <sup>95</sup>
AH-2B Bumper mt & whip .....	379.00	299 <sup>95</sup>
CR-338 High stability crystal unit .....	81.95	
FL-52A 500 Hz CW filter (2nd IF) .....	245.00	199 <sup>95</sup>
FL-53A 250 Hz CW filter (2nd IF) .....	245.00	199 <sup>95</sup>
MB-5 Mobile mount .....	59.95	
SM-6 Desk microphone .....	128.00	119 <sup>95</sup>
SP-3 External speaker .....	140.00	124 <sup>95</sup>
SP-7 Small external speaker .....	94.95	
SP-20 Speaker w/audio filter .....	310.00	249 <sup>95</sup>
SP-21 External speaker .....	138.00	119 <sup>95</sup>
UI-9 FM module .....	113.00	104 <sup>95</sup>
UT-30 Tone encoder .....	55.95	
IC-706 Mini Xcvr/SW Rcvr w/6 & 2m Δmwfv	1599.00	1199 <sup>95</sup>

\$100 rebate from Icom - IC-706 thru 12/31/97

OPC-581 cable FREE with IC-706! Limited Time!

## ICOM - continued

IC-706 Mk II Mini Xcvr/SW Rcvr w/6 & 2m †	1599.00	1299 <sup>95</sup>
OPC-581 cable FREE direct from Icom thru 12/31/97!		
PS-85 Switching power supply .....	406.00	299 <sup>95</sup>
AH-3 Automatic antenna tuner .....	816.00	599 <sup>95</sup>
AH-2B Bumper mt & whip .....	379.00	299 <sup>95</sup>
AT-160 Automatic antenna tuner ....Δmwfv	405.00	249 <sup>95</sup>
OPC-599 7+8-pin - 13-pin adapt; 706/AT160	60.95	
AT-180 Automatic antenna tuner; HF+6m ..	749.00	549 <sup>95</sup>
OPC-598 23' extension cable for AT-180	73.95	
FL-100 500 Hz CW filter .....	133.00	119 <sup>95</sup>
FL-101 250 Hz CW filter .....	133.00	119 <sup>95</sup>
FL-103 2.8 KHz SSB filter .....	123.00	109 <sup>95</sup>
FL-223 1.9 KHz 9 MHz IF SSB filter .....	105.00	99 <sup>95</sup>
FL-232 350 Hz CW/RTTY filter .....	113.00	104 <sup>95</sup>
CR-502 High stability oscillator crystal	95.95	
Suggest dealer installation of CR-502		
HM-77A TTP microphone .....	151.00	139 <sup>95</sup>
MB-62 Mounting bracket for main unit .....	25.95	
MB-63 Mounting bracket for control panel	18.95	
MB-65 Mounting base platform .....	35.95	
OPC-581 11.5' separation cable .....	60.95	
OPC-587 16' separation cable .....	79.95	
OPC-589 8-pin to jack adapter .....	35.95	
OPC-596 Accessory plug w/wires Δmwfv	29.95	
OPC-599 7+8-pin to 13-pin adapter .....	60.95	
SM-8 2-connector desk mic/up/down scan	200.00	169 <sup>95</sup>
SP-7 Small external speaker .....	94.95	
UT-86 Tone squelch; IC-706 Mk II only .....	69.95	
UT-102 Voice synthesizer .....	74.95	
AH-2A Antenna tuning system only Δv	950.00	499 <sup>95</sup>
AH-2B Bumper mt & whip .....	379.00	299 <sup>95</sup>
OPC-137 Adapt; AH-2/2A - 751A/745	25.95	
AT-150 100w 9-band auto ant tuner ....Δmw	638.00	499 <sup>95</sup>
OPC-137 Adapt; AT-150 - 751A/745	25.95	

## SHORTWAVE RECEIVERS

R-1* .1MHz-1.3GHz AM/FM handheld Rcvr Dm	\$650.00	489 <sup>95</sup>
R-1-15 .1MHz-1.3GHz AM/FM hand/cell blkd Dmfv	500.00	399 <sup>95</sup>
HP-4 Lightweight headphones .....	29.95	
Note: R-1/R-1-15 use 'W'-series HT accessories		
R-10-05 .5MHz-1.3GHz AM/FM hand/cell blkd †	610.00	499 <sup>95</sup>
R-10-15* .5MHz-1.3GHz AM/FM/SSB HH Rcvr	610.00	519 <sup>95</sup>
CP-12L Right angle cig cable w/filter .....	36.95	
CS-R10 DOS programming software; R-10	13.95	
OPC-474 Cloning cable (R-10 to R-10) ..	18.95	
CSW-R10 Windows prog soft/cable; R-10 ..	50.95	
CT-17 CI-V level converter .....	169.00	149 <sup>95</sup>
HP-4 Lightweight headphones .....	29.95	
LC-140 Carrying case for R-10 .....	38.95	
OPC-254L Right angle mini DC pwr cable	14.95	
SP-13 Earphone .....	4.95	
CK-70/EX-299 12v DC option; R71A Δwfv	41.95	
EX-257 FM unit; R-71A Δmwv	109.00	99 <sup>95</sup>
FL-32A 500 Hz CW filter; R-71A .....	126.00	114 <sup>95</sup>
FL-63A 250 Hz CW filter; R-71A .....	121.00	109 <sup>95</sup>
UI-8 FM unit; R-72A Δmw	119.00	69 <sup>95</sup>
R-100* .1MHz-1.856GHz AM/FM 12v Rcvr	960.00	819 <sup>95</sup>
R-100-11 .1MHz-1.856GHz am/fm 12v Rcv/cell blkd	960.00	799 <sup>95</sup>
AH-7000 25-1000 MHz discone ant w/coax	206.00	179 <sup>95</sup>
CP-11 Cig cord w/noise filter .....	40.95	
HP-4 Lightweight headphones .....	29.95	
PCR-1000 .5-1300 PC controlled Rcv/cell blkd	599.00	549 <sup>95</sup>
PCR-1000-03* .5-1300MHz PC controlled Rcv	599.00	549 <sup>95</sup>
R-7000* 25 MHz-2 GHz scanning receiver	1667.00	1399 <sup>95</sup>
AH-7000 25-1000 MHz discone ant w/coax	206.00	179 <sup>95</sup>
CK-70 (EX-299) 12v DC option .....	41.95	
MB-12 Mobile mount .....	59.95	
RC-12 Infrared wireless remote control	138.00	124 <sup>95</sup>
SP-3 External speaker .....	140.00	124 <sup>95</sup>
TV-R7000 ATV unit for R-7000 .....	371.00	299 <sup>95</sup>
R-8500 .1MHz - 2GHz receiver/cell blocked †	2465.00	1899 <sup>95</sup>
\$150 instant coupon - R-8500 blocked thru 12/31/97		
R-8500-03* .1MHz - 2GHz receiver .....	2465.00	2049 <sup>95</sup>
AH-7000 25-1000 MHz discone ant w/coax	206.00	179 <sup>95</sup>



## ICOM - continued

	Reg	Sale
CR-293 High stability xtal unit	380.00	329 <sup>95</sup>
FL-52A 500 Hz CW filter	245.00	199 <sup>95</sup>
MB-12 Mobile mount	59.95	
SP-7 Small external speaker	94.95	
SP-21 External speaker	138.00	119 <sup>95</sup>
TV-R7100 TV/FM adapter; R-8500/R-7100	426.00	369 <sup>95</sup>
UT-102 Voice synthesizer	74.95	
R-9000* .1-1999.8MHz Rcvr/spectrum scope	7600.00	6399 <sup>95</sup>
SP-20 Speaker w/audio filter	310.00	249 <sup>95</sup>
UT-36 Voice synthesizer	74.95	

\*United States & state government agencies or a political subdivision thereof and communications utility companies and their legal agents **ONLY** may purchase unblocked models of R-1/R-10/R-100/PCR-1000/R-7000/R-8500 and/or R-9000 for official government or communications utility company use only. Mail or FAX purchase order to AES. Exports: inquire.

## 2m TRANSCEIVERS

IC-2000H 50w 2m FM Xcvr w/TTP mic	\$310.00	259 <sup>95</sup>
OPC-347 23' DC power cable	46.95	
OPC-589 8-pin to jack adapter	35.95	
UT-85 Tone squelch unit	76.95	
UT-101 DTMF unit	28.95	
IC-281H 50w 2m FM Xcvr/TTP/9600 .Dmwf	513.00	349 <sup>95</sup>
MB-17A Quick release bracket	49.95	
OPC-347 23' DC power cable	46.95	
OPC-440 Mic extension cable	85.95	
OPC-589 8-pin to jack adapter	35.95	
UT-66 Voice synthesizer	83.95	
UT-85 Tone squelch unit	76.95	
FL-83 CW filter; IC-275H	150.00	99 <sup>95</sup>
UT-55 DTMF tone enc/dec; 2330A/2340	69.95	
UT-67 Tone squelch unit; IC-2330A	124.00	59 <sup>95</sup>
IC-207H 45w 2m/35w 440 FM Xcvr/TTP mic	480.00	399 <sup>95</sup>

**OPC-600 cable FREE direct from Icom thru 12/31/97!**

BC-96 Microphone holder	43.95	
CP-13L Cig cable w/filter for BC-96	40.95	
OPC-288L DC power cable for BC-96	19.95	
CS-207 DOS prog software; IC-207H	13.95	
OPC-646 Cloning cable	89.95	
CSW-207 Win prog soft/cable; IC-207H	50.95	
EX-1759 Infrared receiver	110.95	99 <sup>95</sup>
HM-90A Wireless microphone	209.00	149 <sup>95</sup>
HS-62 Flexible mobile mic	70.95	
MB-58 Remote controller bracket	39.95	
OPC-347 23' DC power cable	46.95	
OPC-440 Mic extension cable	85.95	
OPC-441 Speaker extension cable	33.95	
OPC-589 8-pin to jack adapter	35.95	
OPC-600 11.5' separation kit	45.95	
OPC-601 23' separation kit	60.95	
OPC-647 8.2' mic extension cable	54.95	
UT-89 Tone scan/decode unit; IC-2350H	110.00	99 <sup>95</sup>
IC-2700H LTD 50w 2m/35w 440/HM90A	860.00	599 <sup>95</sup>
IC-2700H 50w 2m/35w 440/reg TTP	755.00	449 <sup>95</sup>

BC-96 Microphone holder	43.95	
EX-1513 Infrared sub receiver	28.95	
HM-90A Wireless microphone	209.00	149 <sup>95</sup>
MB-17A Quick release bracket	49.95	
MB-58 Remote controller bracket	39.95	
OPC-347 23' DC power cable	46.95	
OPC-438 11.5' separation kit	41.95	
OPC-439 23' separation kit	60.95	
OPC-440 Mic extension cable	85.95	
OPC-441 Speaker extension cable	33.95	
OPC-589 8-pin to jack adapter	35.95	
UT-66 Voice synthesizer	83.95	
UT-84 Tone squelch unit	110.00	99 <sup>95</sup>
IC-2710H 50w 2m/35w 440 FM Xcvr/TTP mic	605.00	509 <sup>95</sup>

**OPC-600 cable FREE direct from Icom thru 12/31/97!**

BC-96 Microphone holder	43.95	
CP-13 Cig cable w/filter for BC-96	40.95	
OPC-288 DC power cable for BC-96	19.95	
CS-2710H DOS prog software; IC-2710H	13.95	
OPC-646 Cloning cable	89.95	

## ICOM - continued

	Reg	Sale
CSW-2710 Win prog soft/cable; IC-2710H	50.95	
EX-1513 Infrared sub receiver	28.95	
EX-1759 Infrared receiver	110.00	99 <sup>95</sup>
HM-90A Wireless microphone	209.00	149 <sup>95</sup>
HS-62 Flexible mobile mic	70.95	
MB-58 Remote controller bracket	39.95	
MB-65 Mounting base platform	35.95	
OPC-347 23' DC power cable	46.95	
OPC-440 Mic extension cable	85.95	
OPC-441 Speaker extension cable	33.95	
OPC-589 8-pin to jack adapter	35.95	
OPC-600 11.5' separation kit	45.95	
OPC-601 23' separation kit	60.95	
OPC-647 8.2' mic extension cable	54.95	
UT-49 DTMF decoder unit	74.95	
UT-104 Tone squelch unit	80.95	

IC-820H 2m/430 SB/FM sat Xcvr/9600 .Dmwf	1675.00	1099 <sup>95</sup>
IC-821H 2m/430 SSB/FM sat Xcvr/9600/mic	2095.00	1749 <sup>95</sup>
PS-85 Switching power supply	406.00	299 <sup>95</sup>
AG-25 2m mast mounted GaSfET preamp	220.00	189 <sup>95</sup>
AG-35 430 MHz mast mounted preamp	228.00	199 <sup>95</sup>
CR-293 High stability xtal unit	380.00	329 <sup>95</sup>
FL-132 500 Hz main receiver CW filter	133.00	119 <sup>95</sup>
FL-133 500 Hz sub band receiver CW filter	133.00	119 <sup>95</sup>
HM-12 Scan hand microphone	74.95	
MB-5 Mobile mount	59.95	
SM-6 Desk microphone	128.00	119 <sup>95</sup>
SP-3 External speaker	140.00	124 <sup>95</sup>
SP-7 Small external speaker	94.95	
SP-20 Speaker w/audio filter	310.00	249 <sup>95</sup>
SP-21 External speaker	138.00	119 <sup>95</sup>
UT-36 Voice synthesizer; 820H	74.95	
UT-50 Tone decoder	74.95	
UT-84 Tone squelch unit; 821H	110.00	99 <sup>95</sup>
UT-102 Voice synthesizer; 821H	74.95	
IC-Delta-100H 2m/440/1.2 GHz FM/TTP .Dmf	1500.00	1249 <sup>95</sup>

MB-50 Remote controller bracket	29.95	
OPC-332 11.5' separation kit	30.95	
OPC-333 23' separation kit	38.95	
OPC-335 16.4' speaker cable	40.95	
OPC-347 23' DC power cable	46.95	
UT-66 Voice synthesizer	83.95	
UT-75 DTMF decoder unit	69.95	
UT-76 Tone squelch unit	165.00	139 <sup>95</sup>
AH-32 2m/440 dual band mob ant	83.00	29 <sup>95</sup>
AHB-32 Tnk lip mt, coax; AH-32	76.00	14 <sup>95</sup>

## Accessories for IC-2AT

AD-12 External pwr adapter; 2/4GAT/32AT	\$ 43.95	
BA-10 Bottom slide cap	14.95	
BC-16U/BM-112U Wall cgr; BP-5A/7/8 only	32.95	
BC-25U Extra wall charger; BP-3 only	35.95	
BC-35 Drop-in rapid charger	150.00	129 <sup>95</sup>
BP-2 425ma 7.2v long life battery	85.95	
BP-3 250ma 8.4v battery	65.95	
BP-4 Alkaline battery cases	35.95	
BP-5 425ma 10.8v high power battery	109.00	99 <sup>95</sup>
BP-5A 425ma 10.8v direct charge batt	109.00	89 <sup>95</sup>
BP-7 425ma 13.5v 5w battery	121.00	109 <sup>95</sup>
BP-8 800ma 8.4v long life battery	120.00	109 <sup>95</sup>
BP-70 Extra 270ma 13.2v batt; 2GAT/32AT	113.00	104 <sup>95</sup>
CP-1 Cig cgr; BP-3/7/8/DC cord	26.95	
CP-10 Battery separation cable/clip	51.00	19 <sup>95</sup>
CP-11 Cig cord w/noise filter	40.95	
DC-1 DC operation module	40.95	
FA-2 Extra 2m flexible antenna	29.95	
FA-1443B Extra 2m/440 dual band flex ant	29.95	
HH-SS Handheld shoulder strap	29.00	9 <sup>95</sup>
HM-9 Speaker/mic	59.95	
HM-46 Slim-line speaker/mic	59.95	
HS-10 Boom mic/headset	69.95	
HS-10SA VOX unit	69.95	
HS-10SB PTT switchbox	69.95	
HS-51 Headset w/VOX	96.95	
MB-16 Window/car door mount	40.00	19 <sup>95</sup>

## ICOM - continued

	Reg	Sale
MB-16D Mobile mtg bkt fol HT	40.00	19 <sup>95</sup>
MB-24 Window/car door mt; 2GAT	41.00	14 <sup>95</sup>
UT-40 Tone squelch decoder; 2GAT/32AT	83.95	
BC-74/BC-110A Extra wall cgr; BP-111-114	40.95	

## Accessories for IC-2IA

AD-26 Batt pack adapt; rapid cgr	\$ 18.00	8 <sup>95</sup>
BP-120 AA alkaline battery case	35.95	
HM-9L Speaker/mic	59.00	29 <sup>95</sup>
LC-83 Vinyl case for BP-121	35.00	9 <sup>95</sup>
LC-85 Vinyl case for BP-123/124	35.00	9 <sup>95</sup>

IC-T2A 2m FM HT/8 AA nicads/cgr	194.00	169 <sup>95</sup>
AD-81 Adapter for BC-119-11	17.95	
BC-119-11 Desk charger (adapter required)	103.00	94 <sup>95</sup>
BP-194 AA alkaline battery case	18.95	
BP-195 9.6v 700ma nicad battery	42.95	
BP-196 9.6v 1050ma nicad battery	53.95	
CP-12L Rt angle cig charge cable w/filter	36.95	
CS-T2 DOS prog software for IC-T2A	13.95	
OPC-474 Cloning cable (T2A to T2A)	18.95	
OPC-478 PC to radio cloning cbl; T2A	45.95	
CSW-HH Win prog soft w/cable; T2A	50.95	
HM-46 Slim-line speaker/mic	59.95	
HM-54 Hvy duty spkr/mic	83.95	
HM-75A Remote control microphone	96.95	
HS-51 Headset w/VOX	96.95	
LC-145 Carrying case for IC-T2A	38.95	
OPC-254L Right angle mini DC chg cable	14.95	
SP-13 Earphone	4.95	
AD-51 Batt pack adapt; rapid cgr; W31A/Z1A	14.95	
LC-123 Vinyl case; Z1A; BP170/71/72	38.95	29 <sup>95</sup>
LC-124 Vinyl case; IC-Z1A w/BP-173	38.95	
UT-93 Tone squelch; early IC-Z1A	83.00	29 <sup>95</sup>

IC-T22A 2m FM HT/batt/cgr/TTP	283.00	239 <sup>95</sup>
IC-T7A/HP 4w 2m/440 FM HT/batt/cgr/TTP	330.00	279 <sup>95</sup>
IC-W32A 5w 2m/440 FM HT/batt/cgr/TTP/tone	398.00	339 <sup>95</sup>
AD-56 Batt pack adapter for rapid charger	18.95	
BC-119-11 Desk charger (adapter required)	103.00	94 <sup>95</sup>
BC-74/BC-110A Extra wall cgr; BP-111-114	40.95	
BP-170 Battery case	35.95	
BP-171 4.8v 700ma battery	83.00	49 <sup>95</sup>
BP-172 4.8v 950ma battery	91.95	
BP-173 9.6v 600ma battery	150.00	139 <sup>95</sup>
BP-180 7.2v 600ma battery	83.95	
CP-12 Cig lighter cable w/filter	36.95	
CP-12L Right angle cig cable w/filter	36.95	
CS-T7 DOS prog software for IC-T7A	13.95	
CSW-32 DOS prog software for IC-W32A	13.95	
OPC-474 Cloning cbl (T7/32A to T7/32A)	18.95	
OPC-478 PC to radio cloning cbl; T7A/W32A	45.95	
CSW-HH Win prog soft w/cable; W32A/T7A	50.95	
HM-46 Slim-line speaker/mic	59.95	
HM-46L Slim-line spkr/mic, rt angle plug	59.95	
HM-54 Hvy duty spkr/mic	83.95	
HM-75A Remote control microphone	96.95	
HS-85 Headset	105.00	94 <sup>95</sup>

LC-125 Vinyl case; T22A w/BP170/171/172	38.95	
LC-126 Vinyl case; T22A w/BP173	38.95	
LC-128 Vinyl case; IC-W32A	38.95	
LC-136 Vinyl case; T7A w/BP170/171/172	38.95	
LC-137 Vinyl case; T7A w/BP173/180	38.95	
MB-30 Mobile/wall bracket	41.95	
NCP-1 Nylon chest pack	44.95	39 <sup>95</sup>
OPC-254 Mini DC power cable	14.95	
OPC-254L Right angle mini DC pwr cable	14.95	
SP-13 Earphone	4.95	
UT-94 Tone squelch unit; T22A	55.95	
BP-130 Battery case; W21AT	35.95	
BP-131 900ma 7.2v batt/mic; W21AT	133.00	79 <sup>95</sup>
BP-132 600ma 12v batt/mic; W21AT	150.00	89 <sup>95</sup>
BP-157 900ma 7.2v battery; W21AT	68.95	
HM-75 Spkr/mic w/rem cont; W21AT	96.95	89 <sup>95</sup>
LC-105 Vinyl case; W21AT w/BP-130/131 Dm	30.95	



# PRICE LIST

## ICOM - continued

### Accessories for IC-2SAT/2SRA/24AT/W2A

	Reg	Sale
AD-14 BC-74 charge adapter	\$	43.95
AH-20 Replacement rcv ant for IC-2SRA		28.95
BA-12 Drop-in charger adapter		29.95
BC-72 Rapid desk charger	186.00	149 <sup>95</sup>
BC-74/BC-110A Extra wall cgr; 24AT/S-series		40.95
BC-77/BC-105A Extra wall cgr; W2A/2SRA		40.95
BP-81 7.2v 110ma battery	Δv	76.00 49 <sup>95</sup>
BP-82 7.2v 300ma battery	Δmwfv	83.00 49 <sup>95</sup>
BP-83 7.2v 600ma battery		90.95
BP-84 7.2v 1000ma battery		120.00 109 <sup>95</sup>
BP-85 12v 340ma 5w battery	Δmwv	155.00 119 <sup>95</sup>
BP-90 AA alkaline battery case		35.95
CP-12 Cig lighter cable w/filter		36.95
CP-13 Cig cable w/filter; W2A/2SRA		40.95
HM-9 Speaker/microphone		59.95
HM-46 Slim-line speaker/mic		59.95
HM-54 Hvy duty spkr/mic; not for 2G/W2A		83.95
HM-65 Slim-line spkr/mic; W2A/2SRA		76.95
HS-51 Headset w/VOX		96.95
HS-60 VOX headset; W2A/2SRA	Df	121.00 49 <sup>95</sup>
MB-22 Alligator belt/pocket clip		15.95
MB-25 Stainless wall storage unit	Δmwf	41.00 24 <sup>95</sup>
MB-30 Mobile/wall bracket		41.95
OPC-254 Mini DC power cable		14.95
OPC-288 Mini DC pwr cord; W2A/2SRA		19.95
UT-49 DTMF decoder unit for S-series		74.95
UT-50 Tone decoder		74.95
UT-51 Programmable tone encoder unit		83.95
IC-2GXAT/HP 7w 2m HT/batt/cgr/TTP Δmwfv		332.00 249 <sup>95</sup>
AD-25 Battery charger adapter		63.95
AD-28 Batt pack adapter for rapid charger		18.95
BC-119-11 Desk charger (adapter required)		103.00 94 <sup>95</sup>
BC-77/BC-105A Extra wall charger		40.95
BP-130A Battery case	Δmwfv	35.00 24 <sup>95</sup>
BP-132A 600ma 12v battery/mic	Δmwfv	150.00 99 <sup>95</sup>
BP-157A 900ma 7.2v battery		85.95
BP-160 700ma 7.2v battery	Δmwfv	66.00 39 <sup>95</sup>
BP-174 600ma 12v battery	Δmwfv	98.95 89 <sup>95</sup>
CP-13 Cig cable w/filter		40.95
CP-13L Right angle cig cable w/filter		40.95
HM-46 Slim-line speaker/mic		59.95
HM-46L Slim-line spkr/mic, rt angle plug		59.95
HM-54 Heavy duty spkr/mic		83.95
HM-55A Speaker/mic w/TTP	Δmfv	159.00 89 <sup>95</sup>
HS-51 Headset w/VOX		96.95
LC-116 Carrying case; BP-130A/157A/160		38.95
LC-117 Carrying case for BP-132A		38.95
MB-30 Mobile/wall bracket		41.95
OPC-288 Mini DC power cable		19.95
OPC-288L Right angle mini DC pwr cable		19.95
SP-13 Earphone		4.95
UT-49 DTMF decoder unit		74.95
AD-22 External batt chg adapt; D1A	Δmwv	50.95 29 <sup>95</sup>
AD-27 Batt pack adapt; rapid cgr; D1A	Δmf	14.95
BP-101 700ma 7.2v batt; Delta-1A	Δmwfv	94.00 49 <sup>95</sup>
BP-102 1200ma 7.2v batt; Delta-1A	Δmw	129.00 89 <sup>95</sup>
BP-103 600ma 12v battery; Delta-1A	Δmwf	151.00 109 <sup>95</sup>
HM-65 Slim-line spkr/mic; Delta-1A		76.95
LC-81 Vinyl case; BP100/101/102; D1A	Δm	35.95
LC-82 Vinyl case for BP-103; Delta-1A	Δmwv	35.95 29 <sup>95</sup>
UT-70 Tone encoder/decoder; D1A	Δmwfv	200.00 119 <sup>95</sup>
AD-44 Batt pack adapter for rapid cgr; T21A		18.95
BP-151 800ma 6v battery; IC-T21A	Δm	58.95
BP-152 1100ma 6v battery; T21A	Δwfv	66.00 49 <sup>95</sup>
BP-153 600ma 12v battery; IC-T21A		150.00 119 <sup>95</sup>
BP-159 Battery case; IC-T21A		35.95
LC-109 Vinyl case for BP-151/159; IC-T21A		38.95
LC-110 Vinyl case for BP-153; IC-T21A	Δmwfv	38.00 19 <sup>95</sup>
LC-111 Vinyl case for BP-152; IC-T21A		38.95
RP-1520 25w 2m FM repeater	Δm	3025.00 2399 <sup>95</sup>
Repeaters require service dept. set-up; \$72 minimum		
RP-2210 25w 220 FM repeater	special order	2700.00 2229 <sup>95</sup>

## ICOM - continued

Repeaters require service dept. set-up; \$72 minimum

### 430/440 MHz TRANSCEIVERS

	Reg	Sale
IC-481H 35w 440 FM/TTP/9600 baud Δmfv	\$579.00	439 <sup>95</sup>
IC-46XAT 440 FM HT/batt/cgr/TTP	Dmwf	355.00 269 <sup>95</sup>
IC-T41A 440 FM HT/batt/cgr/TTP	Dw	360.00 249 <sup>95</sup>
IC-T42A 440 FM HT/batt/cgr/TTP	Dmw	306.00 259 <sup>95</sup>
IC-46XAT uses same accessories as IC-2GXAT		
IC-T41A uses same accessories as IC-T21A		
IC-T42A uses same accessories as IC-T22A		
RP-4020/50w 50w 440 repeater special order	3200.00	2649 <sup>95</sup>
Repeaters require service dept. set-up; \$72 minimum		

### ACCESSORIES FOR IC-901

MB-21 Bracket for controller unit	Δm	\$ 26.00 9 <sup>95</sup>
OPC-189 Fiber optic cable 65' extension	Dmw	104.00 49 <sup>95</sup>
RP-1220 1.2 GHz FM repeater	special order	3450.00 2849 <sup>95</sup>
RP-1220 requires Icom service dept. set-up; \$72 minimum		
AG-1200 1.2 GHz mast mounted preamp		189.00 169 <sup>95</sup>

### ACCESSORIES

CT-16 Satellite interface unit		\$160.00 144 <sup>95</sup>
CT-17 CI-V level converter		169.00 149 <sup>95</sup>
UX-14 CI-IV/CI-V converter for CT-17		124.00 109 <sup>95</sup>
HM-7 Amplified mobile mic, 8-pin		74.95
HM-12 Scan hand microphone		74.95
HM-14 Scan/TTP microphone		113.00
HM-56A Autodial TTP mic		173.00 149 <sup>95</sup>
MB-23 Side mount carrying handle		15.95
OPC-118 Adapt; AT-500; 725/735/765/781		25.95
OPC-137 24-pin adapt cable; all base		25.95
PS-85 Power supply		406.00 299 <sup>95</sup>
SM-6 Electret desk microphone		128.00 119 <sup>95</sup>
SM-8 2-connector desk mic w/up/down scan		200.00 169 <sup>95</sup>
SM-20 Stand mic for base stations		259.00 219 <sup>95</sup>
SP-3 External speaker		140.00 124 <sup>95</sup>
SP-5 Mobile speaker		54.95
SP-7 Small external speaker		94.95
SP-10 Slim-line external speaker		69.95
SP-12 Slim-line speaker w/visor clip		44.95
SP-20 Speaker w/audio filter		310.00 249 <sup>95</sup>
UT-34 Tone squelch unit		94.95

## INTERFLEX (INT)

dspGOLD Software for AEA DSP-2232	f	\$129.95
KaGOLD DualPort Software for KPC/KAM	f	79.95
KaGOLD DualPort w/Pactor Soft; KPC/KAM	f	99.95
PkGOLD w/Pactor Software for PK-232MBX	f	99.95
PkGOLD/900 Software for PK-900	f	129.95

## International Ant (IAC)

80m double Bazooka 121' antenna		\$135.95
40m double Bazooka 64' antenna		115.95

## JPS (JPS)

ANC-4 Antenna noise canceller		\$195.00 189 <sup>95</sup>
NF-60 Auto DSP audio spectral notch filt Δmwf		160.00 119 <sup>95</sup>
NIR-10 Dlx noise/notch DSP bandpass filt Δmwfv		299.95 219 <sup>95</sup>
NIR-12 Dual DSP noise reduction/filter unit		375.00 349 <sup>95</sup>
Power Pack 115vac/12vdc adapter		16.95
SDK-12 Software development kit; NIR-12		35.95
NRF-7 Noise reducer and filter unit Δmwv		219.95 169 <sup>95</sup>
Power Pack 115vac/12vdc adapter		16.95

## JSC (JSC)

### ROTOR CABLE

JRR-520 5-wire; AR-40	Δmw, per ft.	14¢
JRR-520	Δmw, 100 ft. Roll	12 <sup>95</sup>
JRR-520	Δmw, 500 ft. Roll	44 <sup>95</sup>
JRR-520	Δmw, 1000 ft. Roll	79 <sup>95</sup>

## K-COM (KCO)

RF-1 Modular telephone 3-30 MHz RFI filter		\$ 16.95
RF-1/Low Modular phone .5-3 MHz RFI filter		16.95
RF-1/2-line 2-line modular 3-30 MHz RFI filt		22.95
RF-1/coiled Coiled cord modular 3-30MHz filt		22.95
RF-2 Hard-wired telephone 3-30 MHz RFI filt		10.95

## KLM (KLM)

### ANTENNAS

160V 160, 80 or 40m vertical, 24' high	*	\$300.00 259 <sup>95</sup>
80M-1 80m rotatable dipole, 90' long	T	980.00 849 <sup>95</sup>
80M-1R 80m rotatable dipole w/relays	T	1387.00 1199 <sup>95</sup>
80M-2 80m 2 el beam, 36' boom, 4 db	T	3251.00 2799 <sup>95</sup>
80M-2R 80m 2 el beam w/relays	T	4154.00 3579 <sup>95</sup>
80M-3 80m 3 el beam, 60' boom, 7 db	T	5416.00 4669 <sup>95</sup>
80M-3R 80m 3 el beam w/relays	T	7043.00 6069 <sup>95</sup>
SSV-80-40-15 80/40/15m vert, 65' high	T	966.00 839 <sup>95</sup>
6-12-8LPA 6-12 MHz 8el LP, 36' boom	T	2465.00 2129 <sup>95</sup>
Heavy duty boom only for 6-12-8LPA		
6-12-8LPA w/Heavy duty boom	T	2865.00 2469 <sup>95</sup>
6-30-15LPA 6-30 MHz 15el LP, 46' boom	T	4078.00 3519 <sup>95</sup>
7.2/10-30LPA 7.10-30MHz 8 el, 42' bm	T	1459.00 1259 <sup>95</sup>
Heavy duty boom only for 7.2/10-30-LPA		
7.2/10-30-LPA w/heavy duty boom	T	1921.00 1659 <sup>95</sup>
40M-1B 40m rotatable dipole, 46.5' bm	*	261.00 229 <sup>95</sup>
40M-2B 40m 2 el beam, 16' boom, 4.9 db	*	638.00 549 <sup>95</sup>
40M-3B 40m 3 el beam, 32' boom, 6.5 db	*	911.00 789 <sup>95</sup>
Heavy duty boom only for 40M-3B		
40M-3B w/heavy duty boom	T	1214.00 1049 <sup>95</sup>
40M-4B 40m 4 el beam, 42' boom, 7.2 db	*	1213.00 1049 <sup>95</sup>
Heavy duty boom only for 40M-4B		
40M-4B w/heavy duty boom	T	1716.00 1479 <sup>95</sup>
40-10V 40/20/15/10m 26.5' vertical	†m	373.00 259 <sup>95</sup>
10-30-7LPA 10-30MHz 7el LP, 30' bm, 7db	T	1043.00 899 <sup>95</sup>
Heavy duty boom only for 10-30-7LPA		
10-30-7LPA w/heavy duty boom	T	473.00 409 <sup>95</sup>
10-30-7LPA w/heavy duty boom	T	1577.00 1359 <sup>95</sup>
SK-8 Conv kit for 10-30 log w/o 40m dipole	*	333.00 289 <sup>95</sup>
SK-8/40M Conv kit for 10-30 log w/40m dipole	*	502.00 439 <sup>95</sup>
KT-31 20-15-10m 24.5' rotatable dipole	*	317.00 289 <sup>95</sup>
KT-34 20-15-10m, 4 el, 16' boom, 7 db	*	624.00 539 <sup>95</sup>
KT-34A Upgrade kit - KT-34A to XA	*	334.00 299 <sup>95</sup>
KT-34XA 20-15-10m, 6 el, 32' boom, 9 db	*	858.00 739 <sup>95</sup>
Heavy duty boom only for KT-34XA		
KT-34XA w/heavy duty boom	T	376.00 329 <sup>95</sup>
KT-34XA w/heavy duty boom	T	1206.00 1039 <sup>95</sup>
30M-2 30m 2 el beam	*	520.00 449 <sup>95</sup>
30M-3 30m 3 el beam	*	754.00 649 <sup>95</sup>
20M-4 20m 4 el beam, 21' boom, 7.7 db	*	541.00 469 <sup>95</sup>
20M-5 20m 5 el beam, 42' boom, 9.7 db	T	837.00 729 <sup>95</sup>
Heavy duty boom only for 20M-5		
20M-5 w/heavy duty boom	T	499.00 429 <sup>95</sup>
20M-5 w/heavy duty boom	T	1248.00 1079 <sup>95</sup>
20M-6 20m 6 el beam, 57' boom, 11 db	T	1206.00 1039 <sup>95</sup>
Heavy duty boom only for 20M-6		
20M-6 w/heavy duty boom	T	659.00 569 <sup>95</sup>
20M-6 w/heavy duty boom	T	1750.00 1499 <sup>95</sup>
20-30-6LPA 20-30MHz, 6el LP, 19'bm, 7db	*	391.00 349 <sup>95</sup>
17M-3 17m 3el beam, 16.75' bm, 6.5db	T	443.00 389 <sup>95</sup>
15M-4 15m 4 el beam, 14' boom, 7.7db	*	287.00 249 <sup>95</sup>
15M-6 15m 6 el beam, 36' boom, 10.5db	T	679.00 589 <sup>95</sup>
Heavy duty boom only for 15M-6		
15M-6 w/heavy duty boom	T	406.00 349 <sup>95</sup>
15M-6 w/heavy duty boom	T	989.00 859 <sup>95</sup>
15M-6LD As 15M-6, but light duty	*	527.00 459 <sup>95</sup>
12-17-30D WARC tri-band dipole	*	317.00 279 <sup>95</sup>
12-17-30V WARC tri-band vertical	*	166.00 149 <sup>95</sup>
10M-4 10m 4 el beam, 10' bm, 7.7 db	*	263.00 239 <sup>95</sup>
10M-6 10m 6 el beam, 27.5' boom, 11 db	*	415.00 369 <sup>95</sup>
JV-10 10m 26' vertical antenna	*	122.00 109 <sup>95</sup>
Note: All KLM antennas supplied with a KLM balun/matching system, which is included in the price.		
6M-5 6m 5 el beam, 11.75' boom, 9.7 db	*	261.00 229 <sup>95</sup>
6M-7LB 6m 7el, 25.75' bm, 11.5db	*	381.00 349 <sup>95</sup>
6M-7LD 6m 7 el beam, 20' bm, 10.5 db	*	298.00 269 <sup>95</sup>
6M-10 6m 10 el beam, 34' boom, 11.7 db	T	542.00 469 <sup>95</sup>
6M-14 6m 14 el beam, 61' boom, 14 db	T	754.00 649 <sup>95</sup>
JV-6 6m 15' vertical antenna, 3 db	*	129.00 119 <sup>95</sup>
2M-4X 2m 4 el rear mt beam, 4.2' bm, 8.5db	*	81.00 74 <sup>95</sup>
2M-7X 2m 7 el beam, 8.75' boom, 10.3 db	*	91.00 84 <sup>95</sup>
2M-8 2m 8 el beam, 7.25' bm, 10.3db	Df	124.30 79 <sup>95</sup>
2M-10X 2m 10 el beam, 15' boom, 12.5 db	*	104.00 94 <sup>95</sup>
2M-11X 2m 11 el beam, 15.33' bm, 12.5 db	*	108.00 99 <sup>95</sup>
2M-12X 2m 12 el beam, 21' beam, 13.4 db	*	116.00 106 <sup>95</sup>



## KLM - continued

	Reg	Sale
2M-13LBA 2m 13 el beam, 21.5' bm, 13.3db	125.00	114 <sup>95</sup>
2M-14C 2m circ 14 el beam, 12.9'bm, 11db/CS3	211.00	179 <sup>95</sup>
2M-14CM 2m circ 14 el beam, no switcher ..	169.00	139 <sup>95</sup>
2M-15X 2m 15 el beam, 28' boom, 14.8 db ..	215.00	189 <sup>95</sup>
2M-16LBXM 2m 16 el beam, 28' boom, 14.5db	244.00	199 <sup>95</sup>
2M-20LBX 2m 20 el beam, 38.5' boom .....	316.00	269 <sup>95</sup>
2M-22C 2m circ 22el beam, 19'bm, 13db/CS3	265.00	229 <sup>95</sup>
2M-22CM 2m circ 22 el beam, no switcher ..	237.00	199 <sup>95</sup>
JV-2 2m 5' vertical antenna, 3 db .....	131.00	69 <sup>95</sup>
JV-2X 2m 11' vertical antenna, 5 db .....	181.00	99 <sup>95</sup>
220-7 220 7 el beam, 4.75' bm, 8.8 db .....	98.00	89 <sup>95</sup>
220-14X 220 14 el beam, 14.5' bm, 13.5db ..	142.00	119 <sup>95</sup>
220-22LBX 220 22el beam, 29.75'bm, 15.6db	178.00	154 <sup>95</sup>
JV-220X 220 7' vertical ant, 5 db .....	168.00	49 <sup>95</sup>
432-20LBX 432 20 el, 12.33'bm, 15.3db .....	189.00	119 <sup>95</sup>
432-30LBX 432 30 el beam, 22'bm, 17.3db ..	222.00	194 <sup>95</sup>
435-18C 432 cir 18el, 7'bm, 12db/CS2 .....	267.00	239 <sup>95</sup>
435-18CM 432 circ 18 el beam, no switcher ..	186.00	169 <sup>95</sup>
435-40CX 432 circ 40el beam, 15'bm, 15.2db/CS2	309.00	269 <sup>95</sup>
435-40CXM 432 circ 40 el beam, no switcher ..	221.00	199 <sup>95</sup>
440-6X 440 6 el beam, 2.33' boom, 8.9 db ..	65.00	59 <sup>95</sup>
440-10C 440 10 el beam, 5.33' bm, 11.2 db ..	82.00	74 <sup>95</sup>
440-16X 440 16 el beam, 10.33'bm, 14.2db	142.00	124 <sup>95</sup>
1.2-15LBX 1.2 GHz 15 el beam .....	127.00	114 <sup>95</sup>
1.2-24LBX 1.2 GHz 24 el beam .....	155.00	139 <sup>95</sup>
1.2-44LBX 1.2GHz 44el beam, 12'bm, 18.2db	200.00	179 <sup>95</sup>
CS-2 432 antenna circularity switch .....	85.00	79 <sup>95</sup>
CS-3 2m antenna circularity switch .....	55.95	
LO-With Large set: 2M22C/43540CX/7½' mast	585.00	499 <sup>95</sup>
LO-Without Large set: 2M22CM/43540CXM/mast	462.00	399 <sup>95</sup>
SO-With Small set: 2M14C/43518C/5' mast ..	462.00	399 <sup>95</sup>
SO-Without Small set: 2M14CM/43518CM/mast	364.00	319 <sup>95</sup>

## FIBERGLASS MASTS

5' 1½" OD fiberglass mast .....	\$ 40.00	34 <sup>95</sup>
7-1/2' 1½" OD fiberglass mast .....	50.00	44 <sup>95</sup>

## COUPLERS/POWER DIVIDERS

440-2N 432 MHz - for 2 ants, w/type N .....	\$ 81.95	
440-4N 432 MHz - for 4 ants, w/type N .....	91.95	

## FERRITE BALUNS

3-60-1:1 3-60 MHz 4kw PEP 1:1 balun Dmwf	\$ 55.95	29 <sup>95</sup>
50-150-1:1 50-150MHz 500w PEP 1:1 bln Dmw	56.00	19 <sup>95</sup>

\*These antennas are drop-shipped (shipped direct to you from the KLM factory). On these factory drop-shippments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Monroe, Washington via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order antennas.

## KACHINA (KAC)

505-DSP/505DSP2 PC control Xcvr/hand mic ..	1995.95	
505-AT Internal automatic antenna tuner ..	239.95	
505-ECH External cover for control head ...	25.95	
970055 25' control head cable .....	57.95	
970056 75' control head cable .....	115.95	
970057 25' RS-232 cable .....	16.95	
970058 75' RS-232 cable .....	37.95	

## KANTRONICS (KAN)

Data Engine TNC w/no modems .....	Dmwv	\$319.95	249 <sup>95</sup>
Data Engine w/DE-1200 modem .....	Dmwv	389.95	299 <sup>95</sup>
DE-1200 1200 baud modem .....	Dmwv	89.95	49 <sup>95</sup>
DE-19K2/9K6 19.2/9600 baud modem .....	Dwv	109.95	
KPC-3 Plus/128K Small packet TNC/128K RAM		139.95	
KPC-3 Plus User's Guide (comes w/KPC3+)		14.95	
KPC-9612 Plus/128K 9600 controller/128K ...		309.95	289 <sup>95</sup>
128K 128K memory upgrade; KPC-3/9612 ..		24.95	
KAM Plus All Mode Communicator .....		349.95	299 <sup>95</sup>
12VDC Adaptor 300ma adapt; KAM Plus/KPC3		9.95	
Host Master II+ IBM software .....		89.95	
Host Master Mac Macintosh software .....		89.95	
PC Combo Software for IBM .....	Dmf	49.95	4 <sup>95</sup>

## KANTRONICS - continued

	Reg	Sale
Pactor Eprom option; KAM (pre-V5) .....	79.95	29 <sup>95</sup>
Package 1 Enhancement board; KAM w/8.0E	109.95	
Package 2 8.0E upgrade; KAM enhance brd	39.95	
Package 3 8.0P upgrade; KAM Plus .....	39.95	
Superfax II WX FAX program for IBM .....	49.95	
APRS adapter cable; GPS to Kantronics TNC ..	29.95	
G-TOR Book .....	19.95	
Pager Handbook for the Radio Amateur .....	14.95	

## KENWOOD (KEN)

TS-950SDX Dlx Xcvr w/keyer/DSP/filters .....	5299.95	3999 <sup>95</sup>
DRU-2 Digital recording unit .....	149.95	139 <sup>95</sup>
IF-232C Level translator .....	129.95	119 <sup>95</sup>
MC-43S Extra 8-pin hand mic w/up-down ..	59.95	
MC-60A 8-pin amp desk mic w/up-down ..	159.95	149 <sup>95</sup>
MC-80 8-pin electret desk mic w/up-down ..	119.95	109 <sup>95</sup>
MC-90 2-head DSP desk microphone .....	269.95	239 <sup>95</sup>
SP-950 External spkr w/audio filters .....	159.95	149 <sup>95</sup>
VS-2 Voice synthesizer .....	69.95	
YG-455CN-1 250 Hz CW filter (2nd IF) .....	179.95	164 <sup>95</sup>
YK-88CN-1 270 Hz CW filter (1st IF) .....	139.95	129 <sup>95</sup>
YK-88SN-1 1.8 KHz SSB filter (1st IF) .....	139.95	129 <sup>95</sup>
TS-870S 9-band Xcvr/SW Rcvr/IF-DSP/tuner ..	3199.95	2299 <sup>95</sup>
PS-40 Switching power supply .....	229.95	199 <sup>95</sup>
PS-52 Heavy duty power supply .....	309.95	269 <sup>95</sup>
DRU-3 Digital recording unit .....	139.95	129 <sup>95</sup>
DRU-3A Digital recording unit .....	139.95	129 <sup>95</sup>
KSS Sky command system; HT control 870S	1177.85	999 <sup>95</sup>
MC-43S Extra 8-pin hand mic w/up-down ..	59.95	
MC-60A 8-pin amp desk mic w/up-down ..	159.95	149 <sup>95</sup>
MC-80 8-pin electret desk mic w/up-down ..	119.95	109 <sup>95</sup>
MC-90 2-head DSP desk microphone .....	269.95	239 <sup>95</sup>
SO-2 TCXO unit .....	189.95	179 <sup>95</sup>
SP-31 External speaker .....	99.95	
VS-2 Voice synthesizer .....	69.95	
TS-570D 9-band Xcvr/SW Rcvr/AF-DSP/tune ..	1749.95	1489 <sup>95</sup>
\$200 instant coupon - TS-570D thru 12/31/97		
TS-570S 9-band Xcvr/6m/Rcvr/AF-DSP/tune ..	2069.95	1749 <sup>95</sup>
\$200 instant coupon - TS-570S thru 12/31/97		
PS-40 Switching power supply .....	229.95	199 <sup>95</sup>
PS-53 Heavy duty 22.5A power supply .....	289.95	249 <sup>95</sup>
DRU-3A Digital recording unit .....	139.95	129 <sup>95</sup>
KSS Sky command system; HT control 570D/S	1177.85	999 <sup>95</sup>
MB-430 Mobile mounting bracket .....	49.95	
MC-43S 8-pin hand mic w/up-down .....	59.95	
MC-60A 8-pin amp desk mic w/up-down ..	159.95	149 <sup>95</sup>
MC-80 8-pin electret desk mic w/up-down ..	119.95	109 <sup>95</sup>
MC-90 2-head DSP desk microphone .....	269.95	239 <sup>95</sup>
PG-22 Heavy duty DC cable .....	37.95	
SO-2 TCXO unit .....	189.95	179 <sup>95</sup>
SP-23 External speaker .....	89.95	
VS-3 Voice synthesizer .....	39.95	
YK-88C-1 500 Hz CW filter .....	139.95	129 <sup>95</sup>
YK-88CN-1 270 Hz CW filter .....	139.95	129 <sup>95</sup>
YK-88SN-1 1.8 KHz SSB filter .....	139.95	129 <sup>95</sup>
TS-50S Compact HF Xcvr/SW Rcvr/mic/mt ....	1169.95	849 <sup>95</sup>
TS-60S Compact 6m Xcvr/mic/mt .....	1199.95	999 <sup>95</sup>
PS-40 Switching power supply .....	229.95	199 <sup>95</sup>
PS-53 Heavy duty 22.5A power supply .....	289.95	249 <sup>95</sup>
AT-50 External HF auto tuner .....	379.95	329 <sup>95</sup>
PG-4M 18' extension cable for AT-50 .....	29.95	
IF-10D Computer interface .....	89.95	
IF-232C Level translator .....	129.95	119 <sup>95</sup>
MB-13 Deluxe quick release mtg bracket ..	55.95	
MC-47 Extra multi-func 8-pin hand mic ...	59.95	
MC-60A 8-pin amp desk mic w/up-down ..	159.95	149 <sup>95</sup>
MC-80 8-pin electret desk mic w/up-down ..	119.95	109 <sup>95</sup>
PG-2Y DC cable .....	39.95	
SO-2 TCXO unit .....	189.95	179 <sup>95</sup>
SP-23 External speaker .....	89.95	
TC-50/50Case Travel case for TS-50S/60S	89.95	
YK-107C 500 Hz CW filter .....	139.95	129 <sup>95</sup>
YK-88A-1 AM filter; R-5000 .....	104.95	99 <sup>95</sup>
YK-88C 500 Hz CW filter; R-5000 .....	139.95	129 <sup>95</sup>

## KENWOOD - continued

YK-88CN	270 Hz CW filter; R-5000 .....	104.95	99 <sup>95</sup>
YK-88SN	1.8 KHz SSB filter; R-5000 .....	139.95	129 <sup>95</sup>
AT-450	Internal 80-10m auto tuner; 450/690	279.95	249 <sup>95</sup>
AT-850	Internal 80-10m auto tuner; TS-850S	279.95	249 <sup>95</sup>
HS-5	Deluxe headphones .....	79.95	
HS-6	Lightweight headphones .....	59.95	
LF-30A	1kw PEP low pass filter .....	64.95	
MA-5	5-band 200w PEP HF mob ant ..Δmwfv	189.95	139 <sup>95</sup>
VP-1	Hvy duty chrome spg, bpr mt ..Δmwfv	64.95	29 <sup>95</sup>
MC-43S	8-pin hand mic w/up-down switch ..	59.95	
MC-60A	8-pin amp desk mic w/up-down ....	159.95	149 <sup>95</sup>
MC-80	8-pin electret desk mic w/up-down ...	119.95	109 <sup>95</sup>
E30-1765-08	Adapt cord; MC-85 - 8-pin Xcvr	21.95	
PC-1A	8-pin phone patch .....	139.95	129 <sup>95</sup>
PG-3B	15A DC line noise filter .....	29.95	
PG-3G	25A DC line noise filter .....	51.95	
SP-41	Compact external speaker .....	49.95	
SP-50B	High quality external mobile speaker	55.95	
SW-2100	1.8-30MHz 2kw SWR/power ...Dwfv	174.95	159 <sup>95</sup>
TU-7	Prog encoder; TR-751A .....	Δmf	54.95
TU-8	CTCSS tone unit; TS-450S/690S .....	54.95	
YG-455C-1	500 Hz CW filter (2nd IF); 450/690	169.95	159 <sup>95</sup>
YK-88S-1	2.4 KHz SSB filter (1st IF); 450/690	139.95	129 <sup>95</sup>
TM-255A	40w 2m SSB/FM/9600 baud Δmwfv	1109.95	899 <sup>95</sup>
DFK-3	9' separate display cable kit .....	26.95	
DFK-4	13' remote cable kit .....	59.95	
DFK-7A	Deluxe 22' rem cable kit ....Δmwfv	99.95	79 <sup>95</sup>
PG-5A	Packet data cable .....	15.95	
TSU-8	CTCSS decoder .....	59.95	
TS-790A	45w 2m/40w 440 SB/FM Xcvr/mic †	2199.95	1799 <sup>95</sup>
MFJ 916 duplexer FREE with TS-790A! Limited Time!			
IF-232C	Level translator .....	129.95	119 <sup>95</sup>
MC-43S	Extra 8-pin hand mic w/up-down ..	59.95	
MC-60A	8-pin amp desk mic w/up-down ..	159.95	149 <sup>95</sup>
MC-80	8-pin electret desk mic w/up-down ..	119.95	109 <sup>95</sup>
PG-22	Heavy duty DC cable .....	37.95	
SP-31	External speaker .....	99.95	
TSU-5	Programmable CTCSS decoder .....	64.95	
UT-10	10w 1.2 GHz module .....	629.95	549 <sup>95</sup>
VS-2	Voice synthesizer .....	69.95	
TM-642A	2m/220 FM Xcvr w/TTP .....	Dfv	959.95
TM-642AD	2m/220 FM Xcvr/backlit TTP mic ..	989.95	739 <sup>95</sup>
TM-742AD	50/35w 2m/440 FM/backlit TT mic ..	959.95	699 <sup>95</sup>
MFJ 916 duplexer FREE with TM-742AD! Limited Time!			
DFK-3	9' separate display cable kit .....	26.95	
DFK-4	13' remote cable kit .....	59.95	
DFK-7	Deluxe 22' remote cable kit .....	89.95	
MJ-88	Modular to 8-pin mic adapter .....	30.95	
MJ-89	Modular mic switch .....	69.95	
TSU-7	CTCSS decoder unit .....	59.95	
UT-28S	50w 10m unit .....	Dmwfv	339.95
UT-50S	50w 6m unit .....	379.95	329 <sup>95</sup>
UT-220S	25w 220 MHz unit .....	379.95	329 <sup>95</sup>
UT-440S	35w 440 MHz unit .....	339.95	299 <sup>95</sup>
UT-1200	10w 1.2 GHz unit .....	459.95	399 <sup>95</sup>
DFK-3B	9' separate display cable kit .....	39.95	
DFK-4B	13' remote cable kit .....	60.95	
DFK-7B	Deluxe 22' remote cable kit .....	99.95	
TM-V7A	50w 2m/35w 440 FM Xcvr/TTP mic ..	719.95	549 <sup>95</sup>
\$50 instant coupon - TM-V7A thru 12/31/97			
DFK-3C	9' separate display cable kit .....	44.95	
DFK-4C	13' remote cable kit .....	64.95	
DFK-7C	Deluxe 23' remote cable kit .....	99.95	
MJ-88	Modular to 8-pin mic adapter .....	30.95	
MJ-89	Modular mic switch .....	69.95	
PG-5A	Packet data cable .....	15.95	
VS-3	Voice synthesizer .....	39.95	
MA-700	3db 2m/5.5db 440 ant w/duplexer ..	109.95	99 <sup>95</sup>
Larsen PO-K	Roof mt, coax; MA-700 .....	24.95	
Larsen PO-MM	Magnet mt, coax; MA-700 ..	31.95	
Larsen PO-TLM	Trunk lip mt, coax; MA-700	27.95	
TM-331A	25w 220 FM Xcvr w/TTP mic .....	579.95	499 <sup>95</sup>
DTU-2	Digital paging unit .....	32.95	



# PRICE LIST

## KENWOOD - continued

	Reg	Sale
KQT-8/TSU-6 Prog CTCSS decoder .....	49.95	
MC-44DM Extra multi-function TTP mic .....	79.95	
TM-261A 50w 2m FM Xcvr w/TTP mic .....	379.95	269 <sup>95</sup>
<b>\$20 instant coupon - TM-261A thru 12/31/97</b>		
TM-461A 35w 440 FM Xcvr w/TTP mic .....	509.95	439 <sup>95</sup>
TSU-8 CTCSS decoder .....	59.95	
MC-45DM Extra multi-function TTP mic .....	79.95	39 <sup>95</sup>
MC-52DM Back-lit TTP mic; 241/331/441/541 ..	79.95	
MC-53DM Back-lit TTP mic; 251/733/742/255V7A ..	79.95	

### Accessory for TH-225A/315A/415A/205AT

SC-27 Soft case for TH-225A w/PB-12 ....Dm	\$ 19.50	49 <sup>95</sup>
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### Accessories for TH-75A/77A/25AT/26AT

BT-6 6-AA battery case .....	Dmwf	\$ 29.95
KNB-5A 800ma 7.2v battery .....		63.95
KNB-7A 800ma 12v (5w) batt (not 55AT) .....		87.95
KQT-8/TSU-6 CTCSS encoder/decoder .....		49.95
PG-3E Cig cord w/filter for DC-1 .....	Dmwf	35.95

### Accessory for TH-27A/47A

TH-48A 2w 440 FM HT/batt/cgr/TTP .....	Dmf	469.95	249 <sup>95</sup>
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### Accessories for TH-28A/48A/78A

BC-15A Rapid cgr; PB-13/14/17/18 ...Dmwf	\$119.95	49 <sup>95</sup>
BH-6 Swivel mount .....	39.95	
BT-8 AA alkaline battery case .....	29.95	
EMC-3 Lapel clip mic/ear piece .....	29.95	
HMC-3 VOX/boom mic headset .....	59.95	
ME-1 Memory expansion .....	39.95	
PB-14 300ma 12v (5w) battery .....Df	90.95	69 <sup>95</sup>
PB-17 700ma 12v (5w) battery .....	99.95	
PB-18 1100ma 7.2v battery .....Dmwf	89.95	
PG-2W DC cable w/fuse .....	17.95	
PG-3J Cig lighter cord w/filter .....	36.95	
SC-33 Small soft case; 28A/48A .....	24.95	
SC-34 Large soft case; 28A/48A .....	24.95	
SC-35 Regular soft case; 78A .....Dm	24.95	9 <sup>95</sup>
SC-36 Large soft case; 78A .....Dmf	24.95	9 <sup>95</sup>
SMC-32 Mini water resistant rt angle spkr/mic .....	52.95	
SMC-33 Speaker/mic w/remote control .....	65.95	
SMC-34 Spkr/mic w/vol cont & function keys .....	39.95	
WR-2 Water resistant bag .....	29.95	
TH-22AT 3w 2m FM HT/batt/cgr/TTP .....	299.95	249 <sup>95</sup>

### \$20 instant coupon - TH-22AT thru 12/31/97

TH-22ATH 5w 2m FM HT/batt/KSC-8A/TTP ..	324.95	279 <sup>95</sup>
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### \$20 instant coupon - TH-22ATH thru 12/31/97

TH-42AT 2.5w 440 FM HT/batt/cgr/TTP .....	399.95	339 <sup>95</sup>
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### TH-79A(D) 2.7w 2m/440 HT/batt/cgr/TTP .....

	549.95	379 <sup>95</sup>
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### \$30 instant coupon - TH-79A(D) thru 12/31/97

TH-79A(D)H 5w 2m/440 HT/batt/cgr/TTP ..	579.95	399 <sup>95</sup>
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### \$30 instant coupon - TH-79A(D)H thru 12/31/97

BH-6	Swivel mount .....	29.95	
BT-9	4-AA battery holder .....	29.95	
EMC-1	Lapel clip mic/ear piece .....	Dwfv	29.95
EMC-3	Lapel clip mic/ear piece .....		29.95
HMC-3	VOX/boom mic headset .....		59.95
KSC-8A	Drop-in cgr; 25/26/75/77/22/79 ...		26.95
KSC-14	2-pack rapid charger .....		87.95
PB-32*	600ma 6v battery .....	Δmwfv	66.95
<b>* \$19.95 with purchase of any radio! Limited Time!</b>			
PB-33	1200ma 6v battery .....		89.95
PB-34	600ma 9.6v (5w) battery .....		89.95
PG-2W	DC cable w/fuse .....		17.95
PG-3J	Cig lighter cord w/filter .....		36.95
SC-37	Soft case; 22/42AT/PB-30/32 Dmwfv		24.95
SC-39	Soft case; 22/42AT/PB-33/34 Dmwfv		24.95
SC-41	Soft case; TH-79A(D) w/PB-32 .....		24.95
SC-43	Soft case; TH-79A(D) w/PB-33/34 ...		24.95
SMC-32	Mini water resist rt angle spkr/mic ..		52.95
SMC-33	Speaker/mic w/remote control .....		65.95
SMC-34	Spkr/mic w/vol cont/function keys .....		39.95
TSU-8	CTCSS decoder; TH-22/42AT .....		59.95
WR-2	Water resistant bag; TH-22/42AT .....		29.95
TH-G71AK2	3w 2m/440 FM HT/batt/cgr/TTP ..		409.95
TH-G71A	5w 2m/440 FM HT/batt/cgr/TTP .....		429.95
BC-19	Rapid charger .....		64.95

## KENWOOD - continued

BT-11	4-AA battery holder .....	17.95	
EMC-3	Lapel clip mic/ear piece .....	29.95	
HMC-3	VOX/boom mic headset .....	59.95	
PB-38	650ma 6v battery .....	44.95	
PB-39	600ma 9.6v (5w) battery .....	57.95	
PG-2W	DC cable w/fuse .....	17.95	
PG-3J	Cig lighter cord w/filter .....	36.95	
SC-45	Soft case for PB-38/39 .....	15.95	
SMC-32	Mini water resist rt angle spkr/mic ..	52.95	
SMC-33	Speaker/mic w/remote control .....	65.95	
SMC-34	Spkr/mic w/vol cont/function keys ..	39.95	
TH-235A	1.5w 2m FM FM/batt/cgr/TTP .....	229.95	169 <sup>95</sup>
<b>BT-10 alkaline case FREE w/TH-235A! Limited Time!</b>			
TH-235AH	5w 2m FM FM/batt/desk cgr/TTP ..	249.95	199 <sup>95</sup>
<b>BT-10 alkaline case FREE w/TH-235AH! Limited Time!</b>			
TH-235AK2	2m HT; no batt or cgr .....	Δmwf	199.95 139 <sup>95</sup>
<b>BT-10 alkaline case FREE w/TH-235AK2! Limited Time!</b>			
BT-10	6 AA alkaline battery case .....	13.95	
EMC-3	Lapel clip mic/ear piece .....	29.95	
HMC-3	VOX/boom mic headset .....	59.95	
KSC-8A	Drop-in cgr; 25/26/75/77/22/79 ...	26.95	
KSC-14	2-pack rapid charger .....	87.95	
PB-36	7.2v 950ma nicad battery .....	42.95	
PB-37	12v 950ma (5w) nicad battery .....	57.95	
PG-2W	DC cable w/fuse .....	17.95	
PG-3J	Cig lighter cord w/filter .....	36.95	
SMC-32	Mini water resist rt angle spkr/mic ..	52.95	
SMC-33	Speaker/mic w/remote control .....	65.95	
SMC-34	Spkr/mic w/vol cont/function keys ..	39.95	
TSU-8	CTCSS decoder .....	59.95	
WR-2	Water resistant bag .....	29.95	
EZ-PASS DOS	No-code tech study package ...	34.95	
EZ-PASS WIN 95	No-code tech study package ..	34.95	
Primer	Welcome to Amateur Radio primer ...	2.00	50 <sup>95</sup>

## LARSEN (LAR)

### 27-31 MHz ANTENNAS

NMO-27C 10m ant only (no mount) .....	\$ 33.95
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### 47-54 MHz ANTENNAS

NMO-50C 6m ant only (no mount) .....	\$ 33.95
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### 144-174 MHz ANTENNAS

NMO-150B 2m black ant only (no mt), 3 db ..	\$ 33.95
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NMO-150C 2m ant only (no mount), 3 db .....	30.95
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### 220-265 MHz ANTENNAS

NMO-220B 220 black ant only (no mt), 3 db ..	\$ 33.95
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NMO-220C 220 ant only (no mount), 3 db .....	30.95
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### 440-460 MHz ANTENNAS

NMO-440B 440 black ant only (no mt), 5 db ..	\$ 35.95
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NMO-440C 440 ant only (no mount), 5 db .....	29.95
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OM-440-K 440 no gnd plane ant, 2 db ...Dmf	52.15	12 <sup>95</sup>
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MM-2/70 2m/440 1/4 wave/2db mag mt ant ..	42.95	
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NMO-2/70B 2m/440 blk ant only (no mt), 2/4db	53.95	
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NMO-2/70C 2m/440 ant (no mount), 2/4db ..	48.95	
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NMO-2/70-SH 2m/440 ant (no mt), 1/4 vv/2db	37.95	
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NMO-012 135-160/148-173 2.5db (no mt) ..Dmf	50.95	39 <sup>95</sup>
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NMOQ-Spec 136-512 MHz 1/4 wave ant (no mt)	9.95	
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NMOQ-Spec-B 136-512 black 1/4 vv ant (no mt)	13.95	
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NMOQ-Spec-K 136-512MHz 1/4 vv 3/4" hole ant	23.95	
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NMOQ-2/70-B 2m/440 1/4 vv cell look ant (no mt)	31.95	
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NMO-1290B 1.2 GHz black ant only (no mt) ..	32.95	
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FB1-136 Base station 136-230 MHz ant .....	137.80	129 <sup>95</sup>
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### ON GLASS ANTENNAS

KG-144-UD-PL 2m 3 db on glass antenna ..	\$ 67.95
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KG-220-UD-PL 220 3 db on glass antenna ..	67.95	
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KG-440-UD-PL 440 2.4 db on glass antenna ..	54.95	
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KG-2/70-UD-PL 2m/440 2.5/4.5db on glass ..	91.95	
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KG-Reinstall Reinstall kit for KG-ants .....	5.95	
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### KULDUCKIES - For Hand-helds

KD4-146 2m BNC Kulduckie .....	\$ 17.95
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KD4-2/70 2m/440 BNC Kulduckie .....	27.95	
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KD4-222 220 BNC Kulduckie .....	17.95	
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## LARSEN - continued

	Reg	Sale
KD14-445 440 1/4 wave BNC Kulduckie .....	17.95	
KD4-146-HQ 2m part helical, part 1/4 wave BNC	21.95	
KD14-2M-HW 2m 1/4 wave BNC antenna .....	33.95	
KD14-440-HW 440 1/4 wave BNC antenna .....	33.95	

### ACCESSORIES & REPLACEMENT PARTS

A-7 Adapter for NMO antenna on NLA mount ..	\$ 8.95	
AD-2/70 100w 2m/440 duplexer .....	69.95	
NMO-CAP-B Black rain cap for NMO mount ..	3.95	
NMO-K 3/4" hole mt w/coax for NMO ant .....	13.95	
NMO-MM Magnet mt, coax for NMO ant .....	29.95	
NMO-TLP Low profile tnk lid mt, coax; NMO ant	26.95	
PO-K Roof mt, coax for SO-239 ant .....	24.95	
PO-MM Magnet mt, coax for SO-239 ant .....	31.95	
PO-TLM Trunk lip mt, coax for SO-239 ant ....	27.95	
RG-NLA Extra NLA rubber gaskets (3) .....Dm	2.10	99¢
RG-SS Extra super seal NMO gaskets (3) .....	3.95	
SPRING Shock spring .....	6.95	
TMB-34 Trunk mtg bkt for NMO antenna .....	4.95	
TMB-34B Black trunk mtg bkt for NMO ant ..	6.95	
W-154 Extra closed coil whip; 440 ant ...Δwv	17.80	4 <sup>95</sup>
W-490 49" whip .....	9.95	
W-490B Black 49" whip .....	12.95	

## LOGSAT (LOG)

Logsat Professional Satellite tracking CDROM ..	\$ 69.95
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## MFJ ANTENNA TUNERS (MFJ)

989C Dlx 3kw PEP w/roller inductor .....	\$349.95	299 <sup>95</sup>
986 3kw PEP w/roller inductor .....	299.95	269 <sup>95</sup>
962D 1.5kw PEP/meter/switch/balun/roller ind	249.95	229 <sup>95</sup>
969 HF & 6m 300w roller inductor tuner .....	179.95	169 <sup>95</sup>
949E 300w/meter/dummy/sw/balun .....	149.95	139 <sup>95</sup>
1312C 12vdc 300ma ps 2.5mm coaxial; 949E	12.95	
948 300w/meter/switch/balun .....	129.95	119 <sup>95</sup>
941E 300w tuner w/meter, switch, balun .....	109.95	99 <sup>95</sup>
945E 300w tuner w/meter plus 6m .....	99.95	89 <sup>95</sup>
20 Mobile bracket for 945D .....	4.95	
901B Versa Tuner 200w ant tuner .....	69.95	
910 80-10m mobile antenna matcher .....	19.95	
16010 200w random wire tuner .....	39.95	
903 6m antenna tuner .....	49.95	
906 6m antenna tuner w/wattmeter .....	79.95	
914 Auto tuner extender .....	59.95	
921 2m/220 300w PEP tuner/SWR/wattmeter ..	69.95	
924 440 MHz 300w PEP tuner/SWR/wattmeter ..	69.95	
934 300w tuner w/artificial ground .....	169.95	159 <sup>95</sup>

### MEMORY KEYS

451 Dedicated CW keyboard w/memory .....	\$ 99.95	89 <sup>95</sup>
451X Morse keyboard interface only .....	79.95	
452 CW keyboard/keyer w/disp/keyboard .....	129.95	119 <sup>95</sup>
452X CW keyboard/keyer w/disp, no keyboard ..	99.95	89 <sup>95</sup>
498 Dlx CW keyboard/keyer w/disp/keyboard ..	179.95	169 <sup>95</sup>
498X Dlx CW keyboard w/disp, no keyboard ..	159.95	149 <sup>95</sup>
490 492 keyer/Bencher paddle combination ..	164.95	149 <sup>95</sup>
490X 492 keyer for use w/Bencher or 564 .....	109.95	99 <sup>95</sup>
564 Deluxe iambic paddle for 490X .....	49.95	
492 192 char menu driven memory keyer .....	99.95	89 <sup>95</sup>
80 8000 char memory expansion for 492 ..	14.95	
492X Memory keyer w/8000 char expansion ..	114.95	104 <sup>95</sup>
78 Remote control for 492/492X .....	19.95	
493 32K char menu driven mem keyer .....	139.95	129 <sup>95</sup>
79 Remote control for 493 .....	19.95	
551 IBM AT-101 keyboard for 493 .....	39.95	
5409 493 9-pin serial port 6' cable .....	12.95	
5425 493 25-pin serial port 6' cable .....	12.95	

### ELECTRONIC KEYS

407C Deluxe electronic keyer .....	\$ 69.95
401C Econo keyer .....	49.95

### KEYER/PADDLES

422C Keyer/Bencher paddle combination .....	\$134.95	124 <sup>95</sup>
422CX Keyer only .....	79.95	
441 SlimLine econo keyer .....	59.95	



## MFJ - continued

	Reg	Sale
442 SlimLine keyer/Benchner paddle combo ...	144.95	129 <sup>95</sup>
442X SlimLine keyer only .....	89.95	
447 SlimLine Deluxe keyer .....	79.95	
564 Deluxe iambic chrome paddle .....	49.95	
564B Deluxe iambic black paddle .....	49.95	
<b>COMPUTER INTERFACES</b>		
1224 Interface .....	\$ 99.95	94 <sup>95</sup>
1264 Tape software for VIC/C64; 1224 ..Δf	19.95	4 <sup>95</sup>
1265 Disk software for VIC/C64; 1224 .....	19.95	
1285 Software for IBM; 1224 .....	19.95	
1225 Receive only interface .....	69.95	49 <sup>95</sup>
1264B Tape software; VIC/C64; 1225 ..Δf	19.95	1 <sup>95</sup>
1265B Disk software; VIC/C64; 1225 ..Δf	19.95	1 <sup>95</sup>
1285B Software for IBM; 1225 .....	19.95	14 <sup>95</sup>
1270C Packet radio TNC2 .....	119.95	109 <sup>95</sup>
47A Mailbox 32K mem; 1270/1274 ..Δmw	49.95	29 <sup>95</sup>
47B Mailbox 128K mem; 1270/1274 ..Δmw	69.95	39 <sup>95</sup>
47C Mailbox 512K mem; 1270/1274 ..Δmw	149.95	99 <sup>95</sup>
2400 2400 baud modem .....	29.95	
9600B 9600 baud modem .....	109.95	99 <sup>95</sup>
1270CT Turbo packet w/2400 baud .....	149.95	139 <sup>95</sup>
1270CQ Packet w/9600 baud modem .....	229.95	209 <sup>95</sup>
1276 Packet/Pactor controller .....	139.95	129 <sup>95</sup>
1276T Packet/Pactor Turbo controller .....	169.95	159 <sup>95</sup>
1278B Multi-mode controller w/Pactor .....	299.95	269 <sup>95</sup>
1278B/DSP Controller w/Pactor & DSP .....	379.95	349 <sup>95</sup>
45A 32K RAM IC only .....	14.95	9 <sup>95</sup>
45C 512K RAM IC only .....	99.95	59 <sup>95</sup>
48 1278 upgrade .....	24.95	
48B 1278B upgrade .....	24.95	
48E 1278 packet encryption EPROM ..Δm	29.95	19 <sup>95</sup>
52 TNC2 deviation meter board .....	29.95	
56A Pactor/mailbox 32K board for 1278B ..	69.95	
56B Pactor/mailbox 128K board for 1278B ..	89.95	
56C Pactor/mailbox 512K board; 1278B ....	149.95	139 <sup>95</sup>
780 DSP data filter for 1278B .....	99.95	89 <sup>95</sup>
2400 2400 baud modem .....	29.95	
9600B 9600 baud modem .....	109.95	99 <sup>95</sup>
1278BT Turbo controller/2400/Pactor .....	329.95	299 <sup>95</sup>
1282 C64 starter pack .....	24.95	
1282B Multicom package; C64/128 .....	39.95	
1282BD Multicom 64 disk only .....	29.95	19 <sup>95</sup>
1284 5 1/4" IBM starter pack .....	24.95	
1284D 1284 disk only .....	14.95	
1284M 3 1/2" IBM starter pack .....	24.95	
1284MD 1284M disk only .....	14.95	
1284W MFJCOM for Windows .....	29.95	
1287 Macintosh starter pack .....	24.95	
1287B Mac multicom starter pack .....	49.95	
1287D 1287 disk only .....	14.95	9 <sup>95</sup>
1287BD 1287B disk only .....	39.95	24 <sup>95</sup>
1288 Packet terminal program .....	9.95	
1289 5 1/4" multicom software for IBM Dmwf	59.95	49 <sup>95</sup>
1289D 1289 disks only .....	49.95	39 <sup>95</sup>
1289M 3 1/2" multicom software for IBM ....	59.95	
1289MD 1289M disks only .....	49.95	
1289W Multicom for Windows with cable ..	59.95	
1289WD Multicom for Windows, less cable	49.95	
1293 JVFax/HamCom soft/FJ-1213 ....Dmf	9.95	
1214PC Multimode interface for IBM .....	149.95	139 <sup>95</sup>
59M 1214 3 1/2" software upgrade .....	29.95	
40B TNC2 upgrade 32K/RAM .....	29.95	19 <sup>95</sup>
40C TNC2 upgrade 32K .....	19.95	
40E TNC2 packet encryption EPROM .....	29.95	19 <sup>95</sup>
43 Real time clock for TNC .....	19.95	
44 Plug-in scope tuning adapter .....	19.95	9 <sup>95</sup>
44X Scope tune adapt; 1278 & others ..Δfv	49.95	
52B FM deviation/temp/volt meter for TNC ...	39.95	
1271 Packet card for C64/128 .....	49.95	
1272B TNC to microphone interface .....	39.95	
1272BX TNC/mic switch; PK-232 .....	39.95	
1272BYH TNC/mic switch; KAM HF .....	39.95	
1272BYV TNC/mic switch; KAM VHF .....	39.95	

## MFJ - continued

	Reg	Sale
1272BZ TNC/mic switch; PK-88 .....	39.95	
1272M TNC/mic RJ-45 switch; MFJ/PK-900 ..	39.95	
1272MX TNC/mic RJ-45 switch; PK-232 .....	39.95	
1272MYH TNC/mic RJ-45 switch; KAM HF .....	39.95	
1272MYV TNC/mic RJ-45 sw; KAM VHF; KPC3 ..	39.95	
1272MZ TNC/mic RJ45 switch; PK88 ..Δmwfv	39.95	19 <sup>95</sup>
1273 Packet tuning indicator .....	49.95	9 <sup>95</sup>
<b>SSB/CW FILTERS</b>		
722 SSB/CW notch filter .....	\$ 79.95	
752C Dual tunable SSB/CW filter .....	99.95	89 <sup>95</sup>
781 DSP filter for any TNC or controller .....	129.95	119 <sup>95</sup>
784B Deluxe tuneable DSP filter .....	249.95	229 <sup>95</sup>
5184 Cable pack for 784B .....	7.95	
<b>PHONE PATCH</b>		
624D Phone patch w/audio VU meter .....	\$109.95	99 <sup>95</sup>
<b>DUMMY LOADS</b>		
250 2kw PEP dummy load w/oil .....	\$ 49.95	
250X 2kw PEP dummy load, less oil .....	29.95	
260BN 300w 0-650 MHz N dry dummy .....	34.95	29 <sup>95</sup>
260C 300w 0-650 MHz dry dummy load .....	29.95	
260CN 300w 0-650 MHz type N dry dummy ..	34.95	
264 1.5kw 0-650 MHz dry dummy load .....	59.95	
264N 1.5kw 0-650 MHz type N dry dummy ..	69.95	
<b>SWR/WATTMETERS</b>		
812B 144-220 MHz SWR/FS/wattmeter .....	\$ 29.95	
815B 160-6m cross-needle SWR/wattmeter ..	69.95	
816 1.8-30 MHz toroidal SWR/wattmeter .....	29.95	
817 2m/440 cross needle meter .....	79.95	
840 2m 5w wattmeter/dummy load for HT ....	19.95	
841 2m 5w in-line HT wattmeter/SWR .....	39.95	
860 1.8-60 MHz cross-needle meter .....	39.95	
862 2m/220/440 cross-needle meter .....	49.95	
864 1.8-60MHz/2m/440 cross needle meter ..	79.95	
<b>SHORTWAVE ACCESSORIES</b>		
306 Car radio SWL converter .....	\$ 79.95	
956 LW/MW/SW preselector/tuner .....	39.95	
959B Receiver ant tuner w/preamp .....	99.95	
1020B .3-30 MHz indoor active rcv ant .....	69.95	
1022 300KHz-200MHz active rcv antenna ....	39.95	
1024 .05-30 MHz outdoor active rcv ant .....	129.95	119 <sup>95</sup>
1040B Deluxe receiver preselector .....	99.95	
1045C Receiver preselector .....	69.95	49 <sup>95</sup>
<b>BOOKS</b>		
30 Golden Classics book .....	\$ 9.95	
31 Oscar book .....	7.95	
32 Packet Made Easy book .....	12.95	
33 Mobile Handbook book .....	12.95	
35 World of Ham Radio book .....	7.95	
36 Shortwave Listeners Guide; Apts/Condos ..	9.95	
37 Ham Communications Circuit Files book ..	9.95	
38 Easy-up Antennas book .....	16.95	
3036 The Packet Radio Operators book .....	12.95	
3101 Fox Hunt Adventure book .....	7.95	
3210 Novice license guide .....	7.95	
3211 Tech Plus license guide .....	7.95	
3212 No code tech license guide .....	14.95	
3213 General license guide .....	7.95	
3214 Advanced license guide .....	7.95	
3215 Extra license guide .....	7.95	
3301 Troubleshooting Antenna & Feedlines book	12.95	
3302 73 Dipole and Long-Wire Antennas .....	12.95	
3303 73 Vertical, Beam, and Triangle Ants ...	12.95	
3304 Technician Antenna Handbook ....Dmwf	9.95	4 <sup>95</sup>
3305 Antennas & Transmission Lines book ...	19.95	
3502 Solid State QRP Projects .....	12.95	
3504 FET Principles, Experiments & Projects	16.95	
3506 Ferromagnetic-Core Design book .....	19.95	
<b>ACCESSORIES</b>		
1305 5vdc 300ma adapter .....	\$ 12.95	
1312 12vdc 300ma adapter, 2.5mm plug .....	12.95	
1312B 12vdc 300ma adapter, 2.1mm plug ..	12.95	
1312C 12vdc 300ma adapter; 2.5mm coaxial	12.95	

## MFJ - continued

	Reg	Sale
1315 12vdc 500ma adapter .....	14.95	
9-102 MFJ 25th anniversary coffee mug .....	3.95	
105B 24-hour quartz wall clock .....	Dwf	19.95
105C 24-hour quartz wall clock .....		19.95
107B 24-hour digital clock .....		9.95
108B 24/12-hour dual disp digital clock .....		19.95
112 Deluxe world map clock .....		24.95
114 Large LED 24-hour clock .....		39.95
116 24/12-hour LED clock/10 minute timer ..		14.95
118 Giant 24/12 hour LCD clock .....		24.95
201 1.5-250 MHz dip meter .....	119.95	109 <sup>95</sup>
202B RF noise bridge .....		59.95
203 160-10m bandswitched dip meter .....		99.95
204B Antenna bridge .....		79.95
205 160-10m ant resistance meter ..Δmwfv		89.95
206 Antenna current probe .....		79.95
207 160-10m SWR analyzer .....		79.95
208 2m SWR analyzer .....		79.95
209 1.8-170 MHz SWR analyzer .....	109.95	99 <sup>95</sup>
212 MatchMaker tune up device .....		79.95
217 SWR analyzer, 30-50 MHz .....		79.95
218 SWR analyzer, 150-170 MHz .....		79.95
219 SWR analyzer, 440 MHz .....		99.95
219N SWR analyzer, 440 MHz w/type N .....		99.95
224 2m FM signal analyzer .....	159.95	149 <sup>95</sup>
249 1.8-170 MHz SWR analyzer/LCD counter	219.95	199 <sup>95</sup>
68 249 to 259 upgrade kit .....		29.95
259 1.8-170 MHz SWR analyzer/RF res meter	239.95	219 <sup>95</sup>
29 Padded carrying pouch; 209/249/259 ..		19.95
29B Pouch with window; 209/249/259 .....		24.95
66 1.8-30/30-170 MHz dip coils; 249/259 ..		19.95
270 Guardian Angel 400w PEP lightning protect		29.95
280 Mobile compact speaker .....		19.95
281 ClearTone communications speaker .....		9.95
283 Speaker/mic, split jack; Alinco .....		19.95
284 Speaker/mic; Icom/Yaesu/Alinco .....		19.95
285 Mini spkr/mic; Icom/Yaesu/Alinco .....		19.95
285L Mini spkr/mic L for Icom/Yaesu/Alinco ..		19.95
285W Mini spkr/mic for Icom W2A .....		19.95
286 Speaker mic; Kenwood .....		19.95
287 Mini spkr/mic; Kenwood .....		19.95
287L Mini spkr/mic L for Kenwood .....		19.95
292I Earphone/mic for Icom HT .....		17.95
292K Earphone/mic for Kenwood HT .....		17.95
292Y Earphone/mic for Yaesu HT .....		17.95
295Y Spkr/mic; Yaesu FT-10/40/50/VX-1R ....		24.95
323 Keep-it-up battery maintainer ....Dmwfv		59.95
346 600 MHz LCD frequency counter ....Δmf	189.95	129 <sup>95</sup>
411 Personal Morse Code Tutor .....		69.95
413 Basic Code Tutor .....		39.95
417 Code Tutor with QSO .....		59.95
418 Code Tutor with LCD display .....		79.95
432 Voice Memory Keyer .....	109.95	99 <sup>95</sup>
462B RTTY/ASCII/CW/AMTOR Rcvr multi-reader	169.95	159 <sup>95</sup>
5162 Receiver cable for 462B .....		4.95
550 Hand key .....		7.95
557 Deluxe code oscillator w/key .....		24.95
701 Toroid RFI filters .....	pack of 4	14.95
702 200w low-pass filter .....		24.95
704 1kw low-pass filter .....		39.95
711 High pass filter .....		19.95
713 2m HT intermod filter .....		59.95
714 2m mobile intermod filter .....		59.95
850 AC line voltage monitor .....		19.95
912 W9INN remote balun .....		39.95
916 2m/440 duplexer .....		29.95
931 Artificial ground unit .....		79.95
1025 Noise canceling antenna .....	119.95	109 <sup>95</sup>
1026 Deluxe noise canceling unit w/antenna	139.95	129 <sup>95</sup>
1112 Multiple DC outlet .....		29.95
1116 Dlx multiple DC outlet .....		44.95
1118 High current multiple DC outlet .....		69.95
1213 Interface for JVFAX/HamComm software		29.95
1266 C64 disk code tutor program ....Δmwfv		19.95



# PRICE LIST

## MFJ - continued

	Reg	Sale
76 1266/67 interface brd; kyr/keyboard ..Δmfv	19.95	1 <sup>95</sup>
1268 IBM PC memory keyer .....	49.95	29 <sup>95</sup>
1269 IBM code tutor .....	19.95	
1281 IBM Easy-DX logging program ..Δmwfv	39.95	19 <sup>95</sup>
1286 Gray Line DX Advantage prog; IBM .....	29.95	
1292 Video digitizer for IBM .....	199.95	129 <sup>95</sup>
1610 Novice theory tutor soft; IBM .....	29.95	19 <sup>95</sup>
1611 Tech theory tutor soft; IBM .....	29.95	19 <sup>95</sup>
1612 General theory tutor soft; IBM .....	29.95	19 <sup>95</sup>
1613 Advanced theory tutor soft; IBM .....	29.95	19 <sup>95</sup>
1614 Extra theory tutor soft; IBM .....	29.95	24 <sup>95</sup>
1615 No-code theory tutor software for IBM ..	49.95	
1621 40-10m 54" portable ant w/tuner .....	79.95	
1630 Novice theory tutor soft; Mac .....	29.95	14 <sup>95</sup>
1631 Technician theory tutor soft; Mac .....	29.95	14 <sup>95</sup>
1632 General theory tutor soft; Mac .....	29.95	14 <sup>95</sup>
1633 Advanced theory tutor soft; Mac .....	29.95	14 <sup>95</sup>
1634 Extra theory tutor soft; Mac .....	29.95	14 <sup>95</sup>
1635 No-code theory tutor software for Mac ..	49.95	
1680I Windows soft package; lcom .....	109.95	79 <sup>95</sup>
1680K Windows soft package; Ken .....	109.95	79 <sup>95</sup>
1680Y Windows soft package; Yaesu ..Δmwfv	109.95	59 <sup>95</sup>
1681 Log Windows software .....	69.95	59 <sup>95</sup>
1682 Packet Windows software .....	29.95	19 <sup>95</sup>
1683I Rig Windows software for lcom .....	29.95	
1683K Rig Windows software for Kenwood ..	29.95	
1683Y Rig Windows software for Yaesu .....	29.95	
5383I Icom Xcvt interface cable .....	49.95	
5383K Kenwood Xcvt interface cable .....	49.95	
5383Y Yaesu interface cable, std 6-pin DIN	49.95	
5383YB Yaesu interface cable, mini 6-pin DIN	49.95	
1700B Combination ant/xmtr switch .....	69.95	
1701 6-position coax switch .....	39.95	
1702B 2-position coax switch .....	21.95	
1702BN 2-pos 1.1 GHz type N switch .....	31.95	
1704 4-pos 500 MHz switch/lightning protect	59.95	
1704N 4-position type N switch .....	69.95	
1710 2m 3/4 wave telescopic antenna .....	9.95	
1712 2m/440 telescopic antenna .....	14.95	
1714 2m 3/4 wave telescopic antenna .....	16.95	
1716 2m/440 duck for HT .....	16.95	
1717 Gain 2m/440 duck for HT .....	19.95	
1718 2m shorty duck for HT .....	12.95	
1721 2m HT UltraLite mag mt antenna .....	14.95	
1722 2m/440 HT UltraLite mag mt antenna ..	18.95	
1724B 2m/440 magnet mt antenna .....	14.95	
1728B 2m 3/4 wave mag mt ant/PL259/BNC ..	24.95	
1729 2m/440 magnet mt antenna .....	29.95	
1730 2m pocket roll-up vertical ant .....	14.95	
1734 2m/440 2.6/6.3db glass mt antenna ..	39.95	
1738 2m 2.6db glass mt antenna .....	29.95	
94 Remount kit for 1734/1738 .....	7.95	
1740 2m 3/4 wave ground plane ant .....	12.95	
1750 2m 3/4 wave ground plane ant .....	19.95	
1752 220 3/4 wave ground plane ant .....	19.95	
1754 2m/440 ground plane antenna .....	24.95	
1762 6m beam antenna .....	69.95	
1763 2m 3el portable beam .....	39.95	
1764 2 & 6m dual 3/4 super gain base ant ..	44.95	
1766 Stacked 2m dual 3/4 base ant .....	109.95	69 <sup>95</sup>
1768 2m/440 beam antenna .....	69.95	
1778 G5RV 160-10m 102' ant (needs tuner)	29.95	
1780 14-30 150w 2' x 2' box loop ant .....	229.95	159 <sup>95</sup>
1782 Super Hi-Q 10-30 loop/basic control ..Δmwfv	269.95	179 <sup>95</sup>
1786 Super Hi-Q 10-30MHz loop/dlx control ..	299.95	269 <sup>95</sup>
1312B 12vdc 300ma adapter; 1782/1786 ..	12.95	
1788 40m Super Hi-Q loop antenna .....	359.95	329 <sup>95</sup>
1792 80-40m vertical antenna .....	159.95	119 <sup>95</sup>
1793 80/40/20m vertical antenna .....	179.95	139 <sup>95</sup>
1796 40/20/15/10/6/2m 10' vertical ant .....	199.95	179 <sup>95</sup>
1798 80/40/30/20/17/15/12/10/6/2m 20' vert	269.95	249 <sup>95</sup>
1824BB Cell look alike BNC scanner ant ..	19.95	
1824BM Cell look Motorola plug scan ant ..Δmw	19.95	9 <sup>95</sup>
1828B Magnet mt BNC scanner antenna .....	29.95	

## MFJ - continued

	Reg	Sale
1828M Mag mt Motorola plug scan ant ..Δw	29.95	24 <sup>95</sup>
1864 Base scanner ant w/preamp .....	79.95	59 <sup>95</sup>
5022 MFJ TNC - Alinco/Standard HT cable ..	14.95	
5022X PK-232 - Alinco/Standard HT cable ..	14.95	
5022YV KAM VHF/KPC3 - Ali/Sta HT cable ..	14.95	
5024 MFJ TNC - Ico/Yae/Al/RS HT cable ..	14.95	
5024B PK/PacComm/compatible - lcom/Yaesu	14.95	
5024X PK-232 - Ico/Yae/Al/RS HT cable ..	14.95	
5024YV KAM VHF/KPC3 - Ico/Yae/Al/RS HT cbl	14.95	
5024Z PK-88 - Ico/Yae/Al/RS HT cbl ..Δmwfv	14.95	
5026 MFJ TNC - Kenwood HT cable .....	14.95	
5026X PK-232 - Kenwood HT cable .....	14.95	
5026YV KAM VHF/KPC3 - Kenwood HT cable ..	14.95	
5026Z PK-88 - Kenwood HT cable .....	14.95	
5080 MFJ TNC - Yaesu 8-pin cable .....	14.95	
5080M MFJ TNC - Yaesu 8-pin modular .....	14.95	
5080MX PK-232 - Yaesu 8-pin modular .....	14.95	
5080MYV KAM VHF/KPC3 - Yaesu 8-pin mod	14.95	
5080MZ PK-88 - Yae 8-pin modular ..Δmwfv	14.95	
5080X PK-232 - Yaesu 8-pin cable .....	14.95	
5080YH KAM HF port - Yaesu 8-pin cable ..	14.95	
5080YV KAM VHF/KPC3 - Yaesu 8-pin cable ..	14.95	
5080Z PK-88 - Yaesu 8-pin cable .....	14.95	
5082 Open end - 8-pin mic cable .....	9.95	
5084 MFJ TNC - lcom 8-pin cable .....	14.95	
5084M MFJ TNC - lcom 8-pin modular .....	14.95	
5084MX PK-232 - lcom 8-pin modular .....	14.95	
5084MYV KAM VHF/KPC3 - lcom 8-pin mod ..	14.95	
5084MZ PK-88 - lcom 8-pin modular ..Δmwfv	14.95	
5084X PK-232 - lcom 8-pin cable .....	14.95	
5084YH KAM HF port - lcom 8-pin cable .....	14.95	
5084YV KAM VHF/KPC3 - lcom 8-pin cable ..	14.95	
5084Z PK-88 - Ken/Al/8-pin cable .....	14.95	
5086 MFJ TNC - Kenwood/Alinco 8-pin cable	14.95	
5086M MFJ TNC - Kenwood 8-pin modular ..	14.95	
5086MX PK-232 - Kenwood 8-pin modular ..	14.95	
5086MYV KAM VHF/KPC3 - Ken 8-pin mod ..	14.95	
5086MZ PK-88 - Ken 8-pin modular ..Δmwfv	14.95	
5086X PK-232 - Kenwood/Alinco 8-pin cable	14.95	
5086YH KAM HF port - Ken/Al/8-pin cable ..	14.95	
5086YV KAM VHF/KPC3 - Ken/Al/8-pin cable	14.95	
5086Z PK-88 - Ken/Al/8-pin cable .....	14.95	
5088M MFJ TNC - Radio Shack 8-pin modular	14.95	
5088MX PK-232 - Radio Shack 8-pin modular	14.95	
5088MYV KAM VHF - RS 8-pin modular .....	14.95	
5088MZ PK-88 - Radio Shack 8-pin modular	14.95	
5205 5-pin DIN open end cable .....	4.95	
5222 Open end - Ali split HT cable .....	9.95	
5224 Open end - Ico/Yae/Al/RS HT cable .....	9.95	
5226 Open end - Kenwood HT cable .....	9.95	
5268 Open end - modular phone plug cable ..	9.95	
5412 IBM printer cable .....	9.95	
5413 RS-232 6' cable DB-25M-25F .....	9.95	
5414 RS-232 6' cable DB-25M-9F .....	9.95	
5803/10 3' coax jumper cable .....	4.95	
8100K Shortwave regenerative Rcvr kit .....	59.95	
8100W Shortwave regenerative Rcvr wired ..	79.95	
8400K 2m receiver kit .....	79.95	
8400W 2m receiver wired .....	99.95	
9606X 6m FM/data Xcvt w/mic .....	159.95	149 <sup>95</sup>
8621 VHF data radio w/145.01 MHz .....	119.95	109 <sup>95</sup>
8621X1 APRS ready VHF data radio/145.79MHz	139.95	129 <sup>95</sup>
8631 220 MHz data radio w/223.70 MHz .....	139.95	129 <sup>95</sup>
4110 Portable AC power supply .....	39.95	
5100 Data radio cable - MFJ/TAPR .....	14.95	
5100X Data radio cable - PK-232 ..Δmwfv	14.95	
5100YH Data radio cable - KPC-9612 .....	14.95	
5100YV Data radio cable - KAM/KPC-3 .....	14.95	
5100Z Data radio cable - PK-88 .....	14.95	
9015 5w 15m CW Xcvt .....	189.95	169 <sup>95</sup>
9017 5w 17m CW Xcvt .....	189.95	139 <sup>95</sup>
9020 5w 20m CW Xcvt .....	189.95	169 <sup>95</sup>
9030 5w 30m CW Xcvt .....	189.95	169 <sup>95</sup>
9040 5w 40m CW Xcvt .....	189.95	169 <sup>95</sup>

## MFJ - continued

	Reg	Sale
27 Handle for CW station .....	4.95	
412 Plug-in Curtis keyer .....	39.95	
726 Plug-in audio filter .....	29.95	
971 200w portable ant tuner w/meter .....	89.95	
1770 Portable 15m dipole .....	34.95	
1771 Portable 17m dipole .....	34.95	
1772 Portable 20m dipole .....	34.95	
1773 Portable 30m dipole .....	34.95	
1774 Portable 40m dipole .....	34.95	
4112 Portable power pack .....	49.95	
4114 Rechargeable power pack .....	69.95	
9115B 9015 Xcvt/tuner/ps/ant .....	339.80	259 <sup>95</sup>
9117B 9017 Xcvt/tuner/ps/ant .....	339.80	229 <sup>95</sup>
9120B 9020 Xcvt/971 tuner/4114 ps/1772 ant	339.80	299 <sup>95</sup>
9130B 9030 Xcvt/tuner/ps/ant .....	339.80	259 <sup>95</sup>
9140B 9040 Xcvt/971 tuner/4114 ps/1774 ant	339.80	299 <sup>95</sup>
9406X 6m SSB Xcvt w/mic .....	259.95	239 <sup>95</sup>
9420X 12w 20m SSB Xcvt w/mic .....	239.95	219 <sup>95</sup>
9440X 12w 40m SSB Xcvt w/mic .....	239.95	219 <sup>95</sup>
9475X 12w 75m SSB Xcvt w/mic .....	239.95	219 <sup>95</sup>
62 Headphone kit .....	4.95	
415 SSB Xcvt CW adaptor .....	39.95	
971 200w HF portable ant tuner w/meter ..	89.95	
4110 Portable AC power supply .....	39.95	
4114 Rechargeable power pack .....	69.95	
416 CW adapter for 9406X .....	39.95	
1776 6m dipole for 9406X .....	34.95	

## MG Electronics (MGE)

HFS-1 10w mobile speaker, 3.5mm plug ..... \$ 19.95

## MAGELLAN (MAG)

GPS-2000 GPS receiver .....	\$254.98	149 <sup>95</sup>
GPS-4000 GPS receiver w/carrying case ...Dv	349.99	219 <sup>95</sup>
GPS-4000XL GPS Rcvr w/carrying case ..Δmw	349.99	239 <sup>95</sup>
GPS-4000XL/12 12ch GPS Rcvr/carrying case	349.99	249 <sup>95</sup>
00-69007-000 External power module .....	49.99	
Meridian XL GPS/track plotter/detach ant/case	396.65	299 <sup>95</sup>
Pioneer GPS receiver .....	141.65	99 <sup>95</sup>

## MAHA (MAH)

AA-T AA size rechargeable NiMH batt cell ..ea	\$ 3.50	2 <sup>95</sup>
MH-2A4 Slow charger for 4 max AA NiMH ..	11.95	
MH-BP-7 900ma 13.8v lcom nickel hydride ..	69.95	
MH-BP-8 1200ma 8.4v lcom nickel hydride ..	59.95	
MH-BP-8H 1800ma 8.4v lcom nickel hydride	69.95	
MH-BP-83 1200ma 7.2v lcom nickel hydride	49.95	
MH-BP-132B 1200ma 12v lco blk nick hyd/mic	59.95	
MH-BP-1326 1200ma 12v lco gray nick hyd/mic	59.95	
MH-BP-173 650ma 9.6v lcom nickel hydride	69.95	
MH-BP-180 1000ma 7.2v lcom nickel hydride ..	49.95	
MH-CNB-152 900ma 12v Sta nickel hydride ..	59.95	
MH-CNB-153 1200ma 7.2v Sta nickel hydride	49.95	
MH-FNB-12 900ma 12v Yaesu nickel hydride	59.95	
MH-FNB-17 900ma 7.2v Yaesu nickel hydride	49.95	
MH-FNB-27 900ma 12v Yaesu nickel hydride	59.95	
MH-FNB-31 650ma 4.8v Yaesu nickel hydride	49.95	
MH-FNB-38 650ma 9.6v Yaesu nickel hydride	59.95	
MH-FNB-40H 650ma 7.2v Yae nick hyd/ spg clip	59.95	
MH-FNB-41 900ma 9.6v Yae nick hyd/spg clip	55.95	
MH-FNB-V47 1800ma 7.2v Yaesu nickel hyd	69.95	
V47 Belt Clip Spring loaded belt clip for Yae	9.95	
MH-PB-8 1200ma 12v Kenwood nickel hydride	62.95	
MH-PB-17 900ma 12v Kenwood nickel hydride	69.95	
MH-PB-18 1200ma 7.2v Ken nick hyd; wall cgr only	49.95	
MH-PB-32 900ma 6v Kenwood nickel hydride	47.95	
MH-PB-34 900ma 9.6v Kenwood nickel hydride	57.95	
MH-C777 Univ cgr/conditioner; nicad/nimh ..	49.95	
MH-101-11 Cgr; lco 157/160/174/131/2/Mah 132B/G	69.95	
MH-101-13 Cgr; lco 171/172/173/180/Mah BP173	69.95	
MH-101-Y1 Cgr; Yae 10/11/12/17/25/27/Mah 12/27	69.95	
MH-101-Y2 Cgr; Yae FNB31/38/Mah MHFNB38	69.95	
MH-101-Y3 Cgr; Yae 40/41/42/Mah MHFNB41	69.95	



## MAHA - continued

		Reg	Sale
MH-800K	500mw spkr/mic w/clip; Kenwood	19.95	
MH-800S	500mw spkr/mic/clip; Ali/Ico/Sta/Yae	19.95	
MH-800Y	500mw spkr/mic; Yae FT50/VX1R	24.95	
MH-A101	5/35w 2m FM amplifier	69.95	
MH-A102	5/35w 2m FM/SSB amp/preamp	89.95	
MH-A103	5/50w 2m FM/SSB amp/preamp	119.95	
MH-A104	5/100w 2m FM/SSB amp/preamp	229.95	
MH-A201	5/45w 2m/5/35w 440 FM amp	159.95	
MH-A301	5/50w 2m HT dock boost amp/pre	115.95	
MH-A302	5/45/5/35w 2m/440 HT dock boost	165.95	
MHS-I1	Ico 2G/02/2/32 adapter; A301/302	9.95	
MHS-I2	Ico 2SAT adapter; A301/302	9.95	
MHS-I3	Ico 2GXAT/W21AT adapt; A301/302	9.95	
MHS-I4	Ico 23X/31/7/7/22 adapt; A301/302	11.95	
MHS-K1	Ken 25/26/75/77 adapt; A301/302	9.95	
MHS-K2	Ken 22/79 adapter; A301/302	9.95	
MHS-S1	Standard/ADI adapter; A301/302	9.95	
MHS-Y1	Yae 23/411E/470 adapt; A301/302	9.95	
MHS-Y2	Yae 26/415/530 adapt; A301/302	9.95	
MHS-Y3	Yae FT11/41/51 adapt; A301/302	11.95	
MHS-Y4	Yae FT10/40/50 adapt; A301/302	11.95	
MH-VOX-K	Deluxe VOX spkr/mic for Kenwood	39.95	
MH-VOX-S	Dlx VOX spkr/mic; Ali/Ico/Sta/Yae	39.95	

## MALDOL (MAL)

ARD-5B	2m/440 0/3.8db 19.6" mob ant Δmw	\$ 59.99	39 <sup>95</sup>
ARD-6	2m/440 2.6/4.9db 26.8" mob Δmwfv	70.99	49 <sup>95</sup>
ARD-6B	Blk 2m/440 2.6/4.9 26.8" mob Δmwfv	70.99	49 <sup>95</sup>
ARD-10	2m/440 3/5.5db 34.8" mob Δmwfv	70.99	49 <sup>95</sup>
ARD-10B	Blk 2m/440 3/5.5db 34.8" Δmwfv	70.99	49 <sup>95</sup>
ARD-12	2m/440 4.3/6.8db 48.8" mob Δmwfv	97.99	69 <sup>95</sup>
ARD-12B	Blk 2m/440 4.3/6.8db 48.8" Δmwfv	97.99	69 <sup>95</sup>
ARD-16	2m/440 5/7.7db 65.6" mob Δmwfv	99.99	79 <sup>95</sup>
ARD-16B	Blk 2m/440 5/7.7db 65.6" Δmwfv	99.99	79 <sup>95</sup>
ARS-50	6m 1/4 wave 61.2" mobile Δmwfv	74.99	49 <sup>95</sup>
ARS-146	2m 4.1db 56" mobile ant Δmwfv	77.99	49 <sup>95</sup>
ARS-146B	Black 2m 4.1db 56" mobile Δwfv	77.99	49 <sup>95</sup>
ARS-440	440 5.5db 38.4" mobile ant Δmwfv	67.99	39 <sup>95</sup>
ARS-440B	Black 5.5db 38.4" mobile Δmwfv	67.99	39 <sup>95</sup>
EX-110	2m/440 3/5.5db 37.8" mob ant Δwfv	64.99	39 <sup>95</sup>
EX-110B	Blk 2m/440 3/5.5db 37.8" Δmwfv	64.99	39 <sup>95</sup>
EX-111	2m/440 3.6/6db 44" mobile Δmwfv	77.99	49 <sup>95</sup>
EX-111B	Blk 2m/440 3.6/6db 44" Δmwfv	77.99	49 <sup>95</sup>
FA-50	2m/440 2.15/3.2db 18.8" mag Δmwfv	51.99	39 <sup>95</sup>
FR-30	2m/440 15" flexible tele whip Δmv	52.99	39 <sup>95</sup>
HS-702S	2m/440 0/3.2db 17.6" duck Δmf	19.99	
HS-FOX727	2m/440 9.5/11.15db 3/5el Δmf	119.99	99 <sup>95</sup>
MK-30H	Hatch/trunk power mount Δmf	164.99	
MK-30K	Roof/rail/carrier power mount Δmf	164.99	
VM-2HP	2m 43.2" 3db 300w mobile Δmwfv	47.99	29 <sup>95</sup>
VM-144HP	2m 71.6" 4.5db 200w Δmwfv	60.99	39 <sup>95</sup>
VM-727CR	2m/440 41.6" 3.8/6.2db Δmwfv	67.99	39 <sup>95</sup>
VM-727E	2m/440 58.6" 4.5/7.2db Δmwfv	76.99	49 <sup>95</sup>
VM-727HP	2m/440 36" 3/5.5db 300w Δmwfv	53.99	39 <sup>95</sup>
VM-727RE	2m/440 59.4" 4.5/7.2db Δmwfv	83.99	49 <sup>95</sup>

## MIDLAND (MID)

23-505	1.5-150MHz dual meter SWR/power	\$ 24.95	
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## MIRAGE (MIR)

A-1015G	6m FM/SSB 10/150w amp/preamp	\$389.00	349 <sup>95</sup>
B-23G	2m FM/SSB 2/30w amp/preamp Df	169.00	129 <sup>95</sup>
B-34	2m FM 2/35w amplifier	69.95	
B-34G	2m FM/SSB 3.5/35w amp/preamp	89.95	
B-215G	2m FM/SSB 2/150w amp/preamp	379.00	339 <sup>95</sup>
B-310G	2m FM/SSB 4/100w amp/preamp	199.00	179 <sup>95</sup>
B-1016G	2m FM/SSB 10/160w amp/preamp	379.00	339 <sup>95</sup>
B-1030G	2m FM/SSB 10/300w amp/preamp	689.00	619 <sup>95</sup>
B-1060G*	2m FM/SSB 10/600w 28v amp/pre	1094.00	989 <sup>95</sup>
B-2516G	2m FM/SSB 25/160w amp/preamp	299.00	269 <sup>95</sup>
B-2530G	2m FM/SSB 25/300w amp/preamp	689.00	619 <sup>95</sup>
B-2560G*	2m FM/SSB 25/600w 28v amp/pre	1094.00	989 <sup>95</sup>
B-5016G	2m FM/SSB 50/160w amp/preamp	299.00	269 <sup>95</sup>
B-5030G	2m FM/SSB 50/300w amp/preamp	669.00	599 <sup>95</sup>
B-5060G*	2m FM/SSB 50/600w 28v amp/pre	1094.00	989 <sup>95</sup>

## MIRAGE - continued

\*Requires 28 volts; information on combining power supplies included in operations manual.

		Reg	Sale
BD-35	2m/440 3/45/4/35w HT amp	159.95	149 <sup>95</sup>
C-22G	220 FM/SSB 2/20w amp/preamp	169.00	154 <sup>95</sup>
C-211G	220 FM/SSB 2/110w amp/pre Δmwfv	339.00	259 <sup>95</sup>
C-106G	220 FM/SSB 10/60w amp/preamp	239.00	214 <sup>95</sup>
C-1012G	220 FM/SSB 10/120w amp/preamp	339.00	299 <sup>95</sup>
C-1022G	220 FM/SSB 10/220w amp/preamp	655.00	589 <sup>95</sup>
C-2512G	220 FM/SSB 25/120w amp/preamp	315.00	289 <sup>95</sup>
C-2522G	220 FM/SSB 25/220w amp/preamp	655.00	589 <sup>95</sup>
C-5012G	220 FM/SSB 50/120w amp/pre Δmw	334.00	239 <sup>95</sup>
C-5022G	220 FM/SSB 50/220w amp/pre Δmw	639.00	469 <sup>95</sup>
D-15N	430 FM/SSB/ATV 2/18w type N amp	189.00	169 <sup>95</sup>
D-26N	440 FM/SSB 2/60w type N amplifier	269.00	244 <sup>95</sup>
D-1010N	440 FM/SSB 10/100w type N amp	395.00	354 <sup>95</sup>
D-3010N	440 FM/SSB 30/100w type N amp	365.00	329 <sup>95</sup>
D-100-ATVN	430 ATV 1/52w N amp Δwfv	414.00	329 <sup>95</sup>
D-1010-ATVN	430 ATV 10/100w type N amp	414.00	369 <sup>95</sup>
RC-1*	Remote control head w/18' cable	45.95	

\*Not for B-23/C-22/D-26

The following Repeater Amplifiers are available on Special Order. Specify SO-239 or type N connectors

A-1015NR	6m FM 2/80w type N amplifier	\$599.00	539 <sup>95</sup>
A-1015R	6m FM 2/80w SO-239 amplifier	579.00	519 <sup>95</sup>
B-215NR	2m FM 1/110w type N amplifier	579.00	524 <sup>95</sup>
B-215R	2m FM 1/110w SO-239 amplifier	559.00	504 <sup>95</sup>
B-1016NR	2m FM 2/120w type N amplifier	619.00	559 <sup>95</sup>
B-1016R	2m FM 2/120w SO-239 amplifier	599.00	539 <sup>95</sup>
B-2516NR	2m FM 12/120w type N amplifier	569.00	519 <sup>95</sup>
B-2516R	2m FM 12/120w SO-239 amplifier	549.00	499 <sup>95</sup>
C-211NR	220 FM 5/80w type N amplifier	649.00	584 <sup>95</sup>
C-211R	220 FM 5/80w SO-239 amplifier	629.00	564 <sup>95</sup>
C-1012NR	220 FM 5/90w type N amplifier	649.00	584 <sup>95</sup>
C-1012R	220 FM 5/90w SO-239 amplifier	629.00	564 <sup>95</sup>
C-2512NR	220 FM 15/90w type N amplifier	615.00	559 <sup>95</sup>
C-2512R	220 FM 15/90w SO-239 amplifier	595.00	539 <sup>95</sup>
D-1010NR	440 FM 4/80w type N amplifier	654.00	589 <sup>95</sup>
D-3010NR	440 FM 12/80w type N amplifier	625.00	564 <sup>95</sup>
D-100-ATVN-R	430 ATV 1/40w type N amp	654.00	589 <sup>95</sup>
D-1010-ATVN-R	430 ATV 4/80w type N amp	654.00	589 <sup>95</sup>

## PREAMPS

KP-1/10M	10m in shack preamp	\$139.00	124 <sup>95</sup>
KP-1/6M	6m in shack preamp	139.00	124 <sup>95</sup>
KP-1/2M	2m in shack preamp	139.00	124 <sup>95</sup>
KP-1/220	220 in shack preamp	139.00	124 <sup>95</sup>
KP-1/440	440 in shack preamp	139.00	124 <sup>95</sup>
KP-2/10M	10m mast mount preamp	195.00	174 <sup>95</sup>
KP-2/6M	6m mast mount preamp	195.00	174 <sup>95</sup>
KP-2/2M	2m mast mount preamp	195.00	174 <sup>95</sup>
KP-2/220	220 mast mount preamp	195.00	174 <sup>95</sup>
KP-2/440	440 mast mount preamp	195.00	174 <sup>95</sup>

## WATTMETERS

MP-1	160-10m 25/200/2kw PEP wattmeter	\$235.00	219 <sup>95</sup>
MP-2	6 & 2m 50/500/1.5kw PEP wattmeter	235.00	219 <sup>95</sup>
MP-3	420-450 5/50/500w PEP wattmeter	265.00	249 <sup>95</sup>
MP-4	1.2 GHz 1/10/100w PEP wattmeter	279.00	259 <sup>95</sup>

## NCG (NCG)

BB-516	Motorcycle intercom set	\$ 89.95	
BJP-514	Motorcycle earph/mic; Ali/Ico/Sta/Yae	69.95	
BJP-514K	Motorcycle earphone/mic; Kenwood	69.95	
EN-921K	Spkr/mic earpiece; Kenwood Dwf	44.95	39 <sup>95</sup>
MC-910	Ear/bm mic w/cap-clip/ear hook; not Ken	49.95	
MC-910K	Ear/bm mic w/cap-clip/ear hook; Ken HT	49.95	
MH-900PK	Earpc/bm mic/PTT; Ken HT Dmwfv	39.95	34 <sup>95</sup>
MP-28	Boom mic/headset/PTT; all HT but Ken	39.95	
MP-28K	Boom mic/headset/PTT for Ken HT	39.95	
NCG-2050	1.6-60MHz 30/300/3kw meter	149.95	129 <sup>95</sup>
NCG-3000	118-530MHz 5/20/200w PEP meter	109.95	99 <sup>95</sup>
Power Pocket	12v 2AH lead acid belt batt/cgr	66.95	
RP-150	20A variable ps/lighted meters/fan	189.95	179 <sup>95</sup>
RP-300	30A variable ps/lighted meters/fan	279.95	259 <sup>95</sup>

## NAVAL (NAV)

HTS-3	5-15vdc amplified speaker	\$ 29.95	
MK-303	Earphone/PTT/mic; Icom HT's Δmf	14.95	4 <sup>95</sup>

## NEW WAVE (NEW)

Adventurer	12' extended Portable alum mast m	\$109.95	
Traveler	19' extended Portable alum mast m	124.95	
Rover	26' extended Portable alum mast m	149.95	
Expeditioner	33' extended Portable alum mast m	174.95	
Explorer	40' extended Portable alum mast m	199.95	
Big Foot	Welded, unpainted park-on mt m	119.95	

## NORCOMM (NOR)

NC-101	Tunable CTCSS encoder	\$ 19.95	
NC-104	Programmable CTCSS encoder	24.95	
NC-106	Prog CTCSS encoder/decoder	54.95	
NC-401	Sub-miniature DTMF decoder	59.95	
NC-409	DTMF encoder Δmw	59.95	39 <sup>95</sup>

## NYE VIKING (NYE)

### ANTENNA TUNERS AND ACCESSORIES

MBV-A	3kw tuner with ant switch & meters	\$879.95	
MBV-B	As MBV-A, without meters	760.95	
020-001	2kw low-pass filter	56.95	

### MASTER KEY

330-001	Black enamel base w/cable, plug	\$ 72.95	
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### HEAVY DUTY SPEED-X KEYS WITH NAVY KNOBS

320-001	No shorting switch	\$ 44.95	
320-003	As above, w/shorting switch	51.95	
322-001	Brass hardware, no switch	35.95	
322-003	As above, w/shorting switch	44.95	

### STANDARD SPEED-X KEYS

310-001	Black, no shorting switch	\$ 40.95	
310-003	As above, w/shorting switch	45.95	
312-001	Brass arm, no shorting switch	32.95	
312-003	As above, w/shorting switch	39.95	

### KEY ACCESSORY

013-001	Navy knob for hand key Δmwfv	\$ 15.50	4 <sup>95</sup>
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## Oak Bay Technologies (OAK)

AM-101B	BNC duck window mount	\$ 24.95	
BS-25	Automatic car battery saver module	39.95	
CA-232HH	Handheld packet cable	34.95	
CA-232U	Universal packet cable	34.95	
LP-11P	1.8-30 MHz 1kw low-pass filter	69.95	
LP-50	1.8-54 MHz 1kw low-pass filter	69.95	
PS-101	Hvy duty DC pwr strip/fuses Δmf	84.95	69 <sup>95</sup>
PS-612M	Hvy duty DC pwr strip w/breakers	64.95	

## Optoelectronics (OPT)

8040	Multifunction 10-digit ctr/timer Df	\$679.00	449 <sup>95</sup>
R-10	30-2000MHz FM Interceptor Dmf	299.00	249 <sup>95</sup>
Clipmate	Windshield mt; Scout/400 Δmwfv	25.00	14 <sup>95</sup>
Spectrum	FCC data CDROM/Scout prog Δm	29.00	24 <sup>95</sup>
SSB-220A	SSB/gen purp 3GHz bench ctr Δmwfv	329.00	249 <sup>95</sup>
BLP-70	Low pass receiving filter Δw	40.00	36 <sup>95</sup>
CB-232	PC interface cable Δmwfv	39.00	29 <sup>95</sup>
Optolog	Software; 8040/SSB-220A Δmwfv	25.00	9 <sup>95</sup>
P-30	1X/10X switch probe; ctr/scope Δmf	35.00	24 <sup>95</sup>
TA-100S	100-600MHz tele whip ant Δmwfv	12.00	9 <sup>95</sup>

## OUTBACKER (OUT)

<b>OB-8</b>	300w PEP 6' 75-10m 8-band mobile ant	\$279.95
<b>OB-8HP</b>	500w PEP 6' 75-10m 8-band mob ant	299.95
<b>OB-S8</b>	8-band 300w PEP split ant/storage bag	299.95
<b>OB-8TRI</b>	3-pc 300w PEP 6' 8-band port ant	329.95
<b>Outrunner</b>	300w PEP 9' 9-band mobile ant ..	349.95
<b>OB-M</b>	300w PEP 6' 75/40/20/17/10m/HF marine	429.95
<b>Perth</b>	150w PEP 7.5' 75-10m mobile ant .....	289.95
<b>Perth Plus</b>	150w PEP 75-10m+6m/2m mob ant	299.95
<b>Stealth Plus</b>	100w PEP 4' 75-10m+6/2m ant	269.95
<b>Outreach</b>	300w PEP 12' 160-10m mobile ant	399.95
<b>Outreach 500</b>	600w PEP 12' 160-10m mob ..	439.95
<b>AIP Outpost</b>	Base tripod mte svs for mob ant	199.95



# PRICE LIST

## OUTBACKER - continued

OB-360 Tnk mt/spring/coax; Perth/JR8/Perth Plus	99.95
OB-SB %24 spring and %4 hole base	99.95
Diamond K-400-3/8C %24 trunk mt, 6' coax	69.95
Diamond C-110 10' ext cable; K-400-3/8C	14.95

## PACCOMM (PAC)

APRS port switch	\$ 29.95
BayMod-25 Modem	45.95
HandiPacket Small TNC for handhelds	229.95
PicoPacket TNC, 128K RAM	149.95
PicoPacket battery model TNC, 32K RAM	189.95
PicoPacket battery model TNC, 128K RAM	209.95
PicoPacket dual serial port TNC, 128K RAM	199.95
Spirit-2 Standard high performance controller	239.95
Tiny-2 Mk-2 Multi-purpose TNC	149.95
Tiny-2 Mk-2/GPS TNC w/GPS & mag GPS ant	499.95

## Palomar Engineers (PAL)

FER-2 RF ferrite toroid kit	\$ 20.95
LA-1 Loop amplifier; matches loop to Rcvr	99.95
5-15 MHz plug-in loop (HF-1)	99.95
1.6-5 MHz plug-in loop (160m, 80m)	99.95
.55-1.6 MHz plug-in loop (AM broadcast)	99.95
150-550 KHz plug-in loop (LF, 1750m)	99.95
40-150 KHz plug-in loop (WWVB, Loran)	99.95
M-840 Bar graph HF auto SWR/power meter	199.95
PS-95 AC adapter for M-835/840	15.95
MDB-2 Mag dipole receiving balun	39.95
MLB-1 Mag longwire receiving balun	49.95
MSB-3 Magnetic switch receive balun	135.00
P-405 1.8-54MHz 20db 9v Rcvr preamp	149.95
P-408 1.8-54MHz 20db AC Rcvr preamp	159.95
P-508 .2-30MHz 12v active Rcvr preamp	99.95
PCM-1 1-30MHz RF current meter	135.00
PF-300 SC audio filter	159.95
PK-200 Jones dual-paddle key	189.95
PK-200B Brass Jones dual-paddle key	225.00
PK-203 Brass Jones single lever key	230.00
PT-340 Tuner-Tuner (use with ant tuner)	99.95
RFI-3 RF interference kit	20.95
RX-100 1-100 MHz RX noise bridge	89.95
SMB-5 SmartBridge prog; AT computers	29.95
SB-4 2kw 1.7-30 MHz 4:1 balun w/SO-239	89.95
VLF-A VLF converter; 10-500 KHz to 80m	89.95
VLF-S VLF conv; 10-500 KHz to 4-4.5 MHz	89.95

## PALSTAR (PLS)

AT-300 300w PEP tuner/switch/dummy/meter	\$129.95
AT-300CN 300w PEP tuner/sw/dummy/cross meter	139.95
AT-1500 1500w PEP roller inductor tuner	379.95

## PANASONIC (PAN)

RF-B45 FM/LW/MW/SW portable Rcvr	\$199.95
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## PAR (PAR)

OA-50 6m horizontal omni antenna	\$ 63.95
OA-144 2m horizontal omni antenna	54.95
UHF DN152 440 dual band notch filter	62.95
VHF DN152 2m dual band notch filter	62.95
VHF DN152HT 2m dual band HT notch filter	68.95
UHF-12 12" RG58/silver/gold/teflon PL259s	9.95

## PATCOMM (PAT)

PC-16000 HF Xcvr/digital modem/keyboard	1649.00
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## PENETROX (PEN)

Penetrox A 4 oz tube for antennas	\$ 12.95
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## PERCON (PEC)

Spectrum FCC database CDROM	\$ 29.95
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## PERIPHEx (PER)

BP-3 8.4v 350ma battery for Icom	\$ 46.95
BP-7S 13.2v 1700ma battery for Icom	65.95
BP-8S 9.6v 1700ma battery for Icom	65.95
BP-83S 7.2v 800ma battery for Icom	43.95
BP-84S 7.2v 1700ma battery for Icom	63.95

## PERIPHEx - continued

BP-85S 12v 800ma battery for Icom	76.95
BP-114S 12v 800ma battery for Icom	83.95
BP-132 12v 600ma battery for Icom	54.95
BP-132A 12v 600ma batt for Icom	54.95
SAT Internal 7.2v 300ma int batt; IC-2SAT	25.95
BP-3 Insert 8.4v 270ma insert; Ico BP3 Dmfv	18.95
CNB-152 12v 600ma batt; Standard	58.95
CNB-153 7.2v 1100ma battery for Standard	54.95
EBP-22S 12v 800ma battery for Alinco	65.95
EBP-24S 7.2v 1700ma battery for Alinco	62.95
EBP-34 4.8v 1200ma batt for Alinco	45.95
EBP-34S 4.8v 1700ma batt; Alinco	59.95
EBP-35 7.2v 900ma battery for Alinco	60.95
EBP-36 9.6v 650ma batt for Alinco	62.95
FNB-11 12v 800ma battery for Yaesu	65.95
FNB-12 12v 600ma battery for Yaesu	60.95
FNB-14 7.2v 1100ma battery for Yaesu	55.95
FNB-14S 7.2v 1700ma battery for Yaesu	59.95
FNB-26 7.2v 1100ma battery for Yaesu	60.95
FNB-26S 7.2v 1700ma battery for Yaesu	65.95
FNB-27 12v 600ma battery for Yaesu	60.95
FNB-27S 12v 800ma batt for Yaesu	65.95
FNB-33 4.8v 1700ma batt for Yaesu	53.95
FNB-35 7.2v 600ma batt for Yaesu	49.95
FNB-38 9.6v 650ma batt for Yaesu	66.95
PB-1 12v 1000ma battery for Kenwood	67.95
PB-7S 7.2v 1700ma battery for Kenwood	59.95
PB-8S 12v 800ma battery for Kenwood	59.95
PB-13S 7.2v 1200ma battery for Kenwood	49.95
PB-14S 12v 300ma batt for Kenwood	60.95
PB-17 12v 800ma battery for Kenwood	50.95
PB-18 7.2v 1700ma batt for Kenwood	55.95
PB-25S/26S 8.4v 1700ma battery; Kenwood	75.95
PB-33 6v 1200ma battery for Kenwood	49.95
PB-34 9.6v 600ma battery for Kenwood	54.95
Santec ST-142 9.6v 600ma batt; ST142	24.95

## PHILIPS (PHI)

U-105 Light duty rotor	\$ 69.95
TB-105 Thrust bearing	18.95

## PIPO TOUCH-TONE PADS (PIP)

PK-1 12-digit pad	\$ 71.95
PK-1K 12-digit pad w/delay relay	78.95
PK-1M 12-digit pad for surface mtg	71.95
PK-2 16-digit pad	76.95
PK-2K 16-digit pad w/delay relay	83.95
PK-2M 16-digit pad for surface mtg	76.95
P-7V 12-digit vertical rugged mini pad	58.95

## POLYPHASER (PLY)

### LIGHTNING PROTECTION

IS-50NX-C2 125-1000 375/125/50w N flange	\$ 56.95
IS-50UX-C0 1.5-400 2kw/375/125w flange mt	56.95
IS-50UX-C1 50-700MHz 375/125w flange mt	56.95
IS-B50LN-C2 125-1000 375/125/50w N bulkhead	59.95
IS-B50LU-C0 1.5-400 2kw/375/125w bulkhead	59.95
IS-B50LU-C1 50-700 375/125w bulkhead mt	59.95
IS-IE50LU-C0 1.5-400 dlx 2kw/375/125w bulk	106.95
IS-IE50LU-C1 50-500 dlx 375/125w bulkhead	106.95
IS-IE50LN-C1 50-700 dlx 375/125w N bulkhead	106.95
BF Adapter Bulkhead to flange mt adapter	9.95
FB Adapter Flange to bulkhead mt adapter	11.95
IS-PLD0-120-15A 120v 15A power protector	172.95
IS-PLD0-120-20A 120v 20A power protector	215.95
IS-RCT 8-wire rotor control protector	54.95
J-1 1/2" to 1 1/8" bronze transition clamp	8.95
J-2 1 1/2" to 2 1/4" bronze transition clamp	11.95
IS-SPTL Single phone line protector	57.95
3" STRAP 3" copper strap	2.95
6" STRAP 6" copper strap	3.95
CS112-25 25' 1 1/2" copper strap	25.95
CS112-50 50' 1 1/2" copper strap	51.95

## POLYPHASER - continued

CS112-75 75' 1 1/2" copper strap	75.95
CS112-100 100' 1 1/2" copper strap	100.95
CS25-25 25' 3" copper strap	51.95
CS3-50 50' 3" copper strap	100.95
CS3-75 75' 3" copper strap	150.95
CS3-100 100' 3" copper strap	197.95
CS6-25 25' 6" copper strap	100.95
CS6-50 50' 6" copper strap	197.95
CS6-75 75' 6" copper strap	299.95
CS6-100 100' 6" copper strap	391.95
CU-SPGP Copper single point ground panel	63.95
TK-2 1 1/2" strap to Rohm twr corrosion free clamp	5.95
TK-3 1 1/2" strap-2 1/4" to 3 1/4" mast corr free clamp	8.95
1C-112S #6-#1 wire to 1 1/2" strap clamp bond	10.95
20C-112S #2-0 to #4-0 1 1/2" strap clamp bond	10.95
58R-112S 1 1/2" strap to 5/8" gnd rod clamp bond	12.95
MSC-3 Junc; 2+ 1 1/2" or 3" strap clamp bond	10.95
UNI-KIT 2CT Gnd kit; coax to alum/tin/galv	29.95
UNI-KIT 2TC Gnd kit; galv twr leg to copper	29.95
UNI-KIT 2CC Ground kit; coax to copper	28.95
UNI-KIT 2TT Ground kit; galv/alum-galv	30.95
CCK Copper cleaning kit; 4 oz can, brush	27.95
GLEP Lightning and EMP Protection book	22.95

## The POUCH (POU)

10R For FT-10/40/50	\$ 14.95
S-1 Short 1 Pouch for HT	17.95
S-2 Short 2 Pouch for HT	17.95
S-3 Short 3 Pouch for HT	17.95
Slim Slim Pouch for HT	17.95
Chest B/S Chestpouch ser B w/S pocket	29.95

## PREMIER (PRE)

A-200 2m/440 4.5/7.2db 6' base ant	\$ 86.95
AL-800 2m/440 32" BNC rubber duck ant	34.95
RD-8 2m/440 6.5" BNC duck	17.95
RD-9 2m/440/900 7" BNC duck	18.95
RD-9SMA 2m/440/900 7" SMA duck	21.95
RD-78 2m/440 15" BNC whip	22.95
RD-98 2m/440 17" BNC whip	24.95
RD-98SMA 2m/440 17" SMA whip	27.95
PNC-2 2m/440 3/5.5db 28" broadband mob	43.95
PNC-4 2m/440 3/5.5db 40" fold-over mobile	43.95
MC-2 Super suction & mag mt; NMO/UHF	37.95
TA-1/UHF UHF-style trunk mt/coax	28.95
TA-2 Hvy dty rubber coat tnk mt; NMO/UHF	34.95
DX-2 2m/440 450/300w dplx/UHF	43.95
DX-2/Lead 2m/440 450/300w dplx/lead	46.95
DX-2MN 2m/440 450/300w dplx/N	43.95
DX-2MNL 2m/440 450/300w dplx/lead/N	46.95
MT-1 2m/440 15/60w SWR/pwr meter	49.95
SB-752 12vdc 6.5A port batt power pack	59.95
SB-791 5A ps w/cig outlet; not for radio	29.95
TX-3 2m/440/900-1.2 800/800/200w triplr	54.95
SPM-100 Spkr/mic; ADI/Icom/Yaesu	27.95
SPM-101 Speaker/mic for Kenwood	29.95
SPM-102 Speaker/mic for Yaesu FT-50R	33.95
SPM-200 Lapel mic/earph; ADI/Icom/Yaesu	18.95
SPM-201 Lapel mic/earphone for Kenwood	19.95
SPM-202 Lapel mic/earphone; Yaesu FT-50R	20.95
SPM-200E Lapel mic/earhook; ADI/Ico/Yae	21.95
SPM-201E Lapel mic/earhook for Kenwood	23.95
SPM-202E Lapel mic/earhook; Yaesu FT-50R	24.95
SPM-300 Spkr/mic/lock/volume; ADI/Ico/Yae	34.95
SPM-301 Spkr/mic/PTT lock/volume; Ken	39.95
SPM-302 Spkr/mic/PTT lock/volume; FT-50R	40.95
SPM-400 Boom/mic; ADI/Icom/Yaesu	25.95
SPM-401 Boom/mic for Kenwood	27.95
SPM-402 Boom/mic for Yaesu FT-50R	29.95
SPM-500 Throat/mic/earph; ADI/Icom/Yaesu	59.95
SPM-501 Throat/mic/earphone for Kenwood	61.95
SPM-502 Throat/mic/earphone; Yaesu FT-50R	62.95



## PRO AM by VALOR (VAL)

VHF/UHF ANTENNAS ONLY (No Mounts)		
MO144-440 2m/440 antenna .....	\$ 21.95	
PAQA 136-515 MHz 1/4 wave antenna .....	8.95	
PAQ-144 2m 1/4 wave antenna .....	8.95	
PAQ-435 440 1/4 wave antenna .....	8.95	
PAQ-3820 2m 1/4 wave whip w/24 thread ..	8.95	
PHB-144 2m 1/4 wave 3 db antenna .....	31.95	
PUB-440 440 5 db antenna .....	39.80	14 <sup>95</sup>

## MOUNTS ONLY FOR ABOVE ANTENNAS

PAM Low profile magnet mount w/coax .....	\$ 28.95	
PAMB Black low profile mag mount w/coax ..	28.95	
PAS 3/8" surface mount w/coax .....	20.95	
PASMO 3/8" surface mt only (no coax) .....	7.95	
PAS38 3/8" surface mount w/coax .....	20.95	
PAS38MO 3/8" surface mt only (no coax) .....	7.95	
PAT-2 No hole trunk mount w/coax .....	27.95	
PAT-2B Black no hole trunk mount w/coax ....	27.95	
PAT-3 Swivel NMO-style trunk mt w/coax .....	35.95	

## OTHER VHF/UHF ANTENNAS & MOUNTS

77BNC 2m/440 12" 0/2.1db BNC rubber duck ..	\$ 23.95	
144BNC 2m 12" 1/4 wave rubber duck w/BNC ..	11.95	
220BNC 220 10" 1/4 wave rubber duck w/BNC ..	11.95	
450BNC 440 6 1/2" 1/4 wv rubber duck w/BNC ...	11.95	
BNC-SC Suction cup extension; rubber ducks ..	22.95	
WMSL-BNC Window clip for rubber ducks ..	42.95	
82BNC Magnet mt for BNC w/coax .....	27.95	
101ADN HD alum mirror mt w/SO-239 .....	10.95	
301 3/4-24 magnet mt only w/coax .....	25.95	
401 Low profile 3/4-24 mag mt only w/coax ....	31.95	
DAK Mt for 2 vert ants or horizontal dipole ..	13.95	
GM-100AD SS GM 3/4-24 mirror mt w/SO-239 ..	9.95	
GM-144 2m 2.5db on glass antenna .....	44.95	
GM-270 2m/440 2.6/6.3db on glass antenna ..	59.95	
TGMKD On glass replacement mtg kit .....	8.95	
MM-3401 Maxi-mag mt 3/4-24 kit (3-5" mags)	59.95	
SS-100MOT 3-way NMO mirror mt w/coax .....	23.95	
CX-144/CX-144B 2m 1/4 wave 3db 3/4-24 whip ..	17.95	
MM-270B 2m/440 mini mag mt ant w/BNC ..	56.95	
PA-255 8' 2m/440 base antenna .....	134.95	59 <sup>95</sup>
PAQM 144-450 MHz 1/4 wave BNC mag ant ...	28.95	
PM-144-440BN 2m/440 BNC mag mt ant ....	33.95	
TGS 30-1200MHz on-glass scanner ant .....	48.95	
VAA-002 144-450 MHz 1/4 wave mag mt ant ..	23.95	
VAA-002BN 144-450 MHz 1/4 wv BNC mag ant ..	27.95	
120 Sawtooth hump mt for mobile radios .....	7.95	
D-270 2m/440 100w duplexer .....	45.95	
DB-240 2m/440 base station antenna ....Dfv	105.20	69 <sup>95</sup>

## MOBILE HF ANTENNAS (No Mounts)

AB-5 75/40/20/15/10m antenna .....	\$119.95	
PHF-160 160m 8' 3/4-24 whip .....	97.95	
PHF-75 75m 8' 3/4-24 whip (4' coil, 4' whip) ..	29.95	
PHF-40 40m 8' 3/4-24 whip (4' coil, 4' whip) ..	23.95	
PHF-30 30m 8' 3/4-24 whip (4' coil, 4' whip) ..	23.95	
PHF-20 20m 8' 3/4-24 whip (4' coil, 4' whip) ..	23.95	
PHF-17 17m 8' 3/4-24 whip (4' coil, 4' whip) ..	23.95	
PHF-15 15m 8' 3/4-24 whip (4' coil, 4' whip) ..	23.95	
PHF-12 12m 8' 3/4-24 whip (4' coil, 4' whip) ..	23.95	
PHF-10 10m 8' 3/4-24 whip (4' coil, 4' whip) ..	23.95	
PHF-6 6m 8' 3/4-24 whip (4' coil, 4' whip) ....	23.95	

## QSL Card Holders (ART)

QSL Card Holders, pack of 3, 20 cards/holder	\$ 12.95
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## RF APPLICATIONS (RFA)

P-1500 1.8-30 MHz digital power/SWR meter	\$219.95
P-1500-P Power supply for P-1500 .....	16.95
P-2000A 1.8-30 MHz dig power/SWR meter ..	299.95
P-2000CW 1.8-30 MHz audible (CW) meter ..	249.95
P-3000 Deluxe 1.8-30MHz digital power/SWR	299.95
P-3000-P Power supply for P-3000, etc. ....	12.95
Match Alert VSWR monitor/alarm .....	129.95

## RF CONCEPTS (RFC)

144 2m FM mini-amp 2/30w amp .....	\$119.95	99 <sup>95</sup>
144P 2m FM mini-amp 2/30w amp/preamp ..	129.95	119 <sup>95</sup>
VHF1-60 2m 1/60w FM HT amplifier ..Dmwf	249.95	189 <sup>95</sup>
2-23 2m FM/SSB 2/30w amp/pre .....	149.95	89 <sup>95</sup>
MAX-AMP-10 2m FM/SSB 10/150w amp/preamp	349.95	319 <sup>95</sup>
MAX-AMP-45 2m FM/SSB 45/150w amp/preamp	319.95	289 <sup>95</sup>
2/70 2m/440 FM 3/30/5/20w HT amp ..Dmwf	259.95	199 <sup>95</sup>
2/70G 2m/440 FM 3/30/5/20w HT amp/preamp	289.95	259 <sup>95</sup>
3-211 220 FM/SSB 2/110w amp/pre .....	Dwf 349.95	269 <sup>95</sup>
440 440 FM mini-amp 3/20w amplifier .....	139.95	129 <sup>95</sup>
440P 440 FM mini-amp 3/20w amp/preamp ..	159.95	149 <sup>95</sup>
UHF-50 440 3/50w FM HT type N amp ..Dmf	299.95	229 <sup>95</sup>
4-110 440 FM 10/100w N amp/preamp .....	399.95	359 <sup>95</sup>
4-310 440 FM 30/100w N amp/preamp .....	369.95	339 <sup>95</sup>

## RF LIMITED (RFL)

DF-4000 4kw PEP low pass filter .....	\$159.95	129 <sup>95</sup>
DF-7000 7kw PEP low pass filter .....	179.95	149 <sup>95</sup>
DF-10000 10kw PEP low pass filter .....	199.95	179 <sup>95</sup>
HL-35NP 2m .5-5/20-35w amplifier ..Dmwf	89.95	49 <sup>95</sup>
HL-35V 2m .5-5/20-35w amp/pre .....	Dmwf 119.95	79 <sup>95</sup>
HL-62V 2m .5-10/6-60w amp/preamp ..Dmf	199.95	99 <sup>95</sup>
HL-36U 440 .5-12/30w amplifier .....	Dmwf 259.95	169 <sup>95</sup>

## RF PARTS (See Diamond)

## RF PRODUCTS (RFP)

199-416 BNC mag mt, 10' coax w/BNC .....	\$ 17.95
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## RMS (RMS)

CN-220 1.8-225MHz 1.5kw PEP meter .....	Dmfv \$144.99	99 <sup>95</sup>
PA-546 2m 5/45w amplifier .....	Dmwf 129.99	79 <sup>95</sup>
W-450 140-170/430-470 150w meter ..	Dmfv 69.99	49 <sup>95</sup>

## RACOM (RCO)

700 Automatic morse code identifier .....	Δm \$ 92.95
700-PC Programming kit .....	Δm 30.95

## Radio Amateur Callbook (RAC)

077977 1997 World Radio TV HB .....	Dmwf \$ 24.95
077985 1998 World Radio TV Handbook .....	24.95
RACD05 Winter 1997/98 No Am/Int CDROM ..	49.95

## RADIO PUBLICATIONS

087034 All About Cubical Quad Antennas ....	\$ 13.95
087042 Beam Antenna Handbook .....	13.95
087050 All About VHF Amateur Radio .....	13.95
087069 Radio Amateur Antenna Handbook ..	13.95
087077 Simple, Low Cost Wire Antennas .....	13.95
087093 Interference Handbook .....	13.95
087107 All About Vertical Antennas .....	13.95

## RAMSEY (RAM)

AA-7 Active antenna kit .....	\$ 28.95
AF-1 Hi-Q CW audio filter kit .....	34.95
AR-1 Aircraft receiver kit .....	29.95
CS-1 Crystal radio set kit .....	19.95
CW-7 CMOS keyer kit .....	24.95
DF-1 Foxhound direction finder kit .....	59.95
DN-1 Nicad conditioner/fast charger kit .....	49.95
FM-1 300' FM broadcast transmitter kit .....	5.95
FM-4 Hi power FM broadcast transmitter kit	14.95
FR-1 FM broadcast receiver kit .....	24.95
HR-20 20m receiver kit .....	29.95
HR-40 40m receiver kit .....	29.95
HR-80 80m receiver kit .....	29.95
PR-10 2m preamp kit .....	17.95
QRP-20 20m CW transmitter kit .....	29.95
QRP-40 40m CW transmitter kit .....	29.95
QRP-80 80m CW transmitter kit .....	29.95
RFS-1 RF sensed switch kit .....	14.95
SCA-1 SCA decoder kit .....	27.95
SR-1 Shortwave receiver kit .....	29.95
TS-1 CW touch paddle switch kit .....	6.95
UT-5 Universal timer kit .....	8.95

## RAMSEY - continued

VS-1 Voice activated switch kit .....	6.95
WA-10 BNC telescopic whip antenna .....	12.95

## ROHN TOWERS (ROH)

HBX-40/BXB-6 40' tower, 10 sq ft, 228 lbs *T	\$469.90	422 <sup>95</sup>
HBX-48/BXB-7 48' tower, 10 sq ft, 303 lbs *T	628.00	565 <sup>95</sup>
HBX-56/BXB-8 56' tower, 10 sq ft, 385 lbs *T	789.00	710 <sup>95</sup>
HDBX-40/BXB-7 40' tower, 18 sq ft, 281 lbs *T	584.60	526 <sup>95</sup>
HDBX-48/BXB-8 48' tower, 18 sq ft, 363 lbs *T	775.00	697 <sup>95</sup>

### \*Drop-shipped from factory

On factory drop-shippings we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB the Rohn factory, which has various locations, via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these drop-shipped towers. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

Note: Rohn states that "antennas developing a large twisting moment due to wind must not be used on HBX/HDBX-series towers. Antennas should be limited to those having a maximum boom length of 10 ft.

SS040D70RTP 40' 70mph self supporting *T	1760.80	1584 <sup>95</sup>
SS050D70RTP 50' 70mph self supporting *T	2135.80	1922 <sup>95</sup>
SS060D70RTP 60' 70mph self supporting *T	3110.80	2799 <sup>95</sup>
SS070D70RTP 70' 70mph self supporting *T	3485.80	3137 <sup>95</sup>
SS080D70RTP 80' 70mph self supporting *T	4635.80	4172 <sup>95</sup>
SS090D70RTP 90' 70mph self supporting *T	5012.70	4511 <sup>95</sup>

### \*SS-series towers drop-shipped from factory only

Other Rohn Towers available on Special Order

## ROSETTA (ROS)

WINRADIO .5MHz-1.3GHz Rcv card/soft/cell blkd	\$699.95	499 <sup>95</sup>
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## SGC (SGC)

04-01	SG-2000 150w 1.8-30 MHz 12v Xcvr .	1695.00	1429 <sup>95</sup>
04-01/54-12	SG-2000/SG-230 package .....†	2590.00	1599 <sup>95</sup>
04-06	SG-2000 Slim Pack Xcvr (no head) ....	1595.00	1339 <sup>95</sup>
04-11	Std SG-2000 rem head/bkt/20' cable	695.00	589 <sup>95</sup>
04-15	Remote mobile head/mem ch's only	495.00	399 <sup>95</sup>
04-10	SG-2000 Xcvr w/PowerTalk head .....	1995.00	1679 <sup>95</sup>
04-23	SG-2000 Xcvr w/Power Talk head/DSP	2295.00	1899 <sup>95</sup>
04-12	Remote kit w/swivel bkt & cable .....	200.00	179 <sup>95</sup>
04-13	Remote kit w/5-way mount & cable	350.00	319 <sup>95</sup>
04-14	Rem kit w/suction cup mt & cable ....	495.00	449 <sup>95</sup>
04-22	PowerTalk remote head .....	1095.00	799 <sup>95</sup>
51-82	Fan kit for continuous duty xmit .....	300.00	269 <sup>95</sup>
52-31	Waterproof military handset .....	375.00	339 <sup>95</sup>
52-32	Telephone handset .....	190.00	174 <sup>95</sup>
52-34	RS-232 interface; SG-2000 Xcvr .....	195.00	179 <sup>95</sup>
52-47	Shock/military mounting tray .....	300.00	269 <sup>95</sup>
52-51	CA-1 High voltage feed wire .per ft.	79¢	
52-52	CA-2 RG-58 coax cable .....per ft.	99¢	
52-53	CA-230 Ant coupler cable .....per ft.	4.95	
52-54	CA-2000 Remote head cable per ft.	4.95	
53-04	PS-30 30A/40A peak unreg ps .....	425.00	399 <sup>95</sup>
53-05	PS-50 50A/70A peak unreg ps .....	469.50	429 <sup>95</sup>
52-61	PSC/12-1 12' ps cable, 1 plug ....	50.95	
52-62	PSC/12-2 12' ps cable, 2 plugs ..	60.95	
05-01	SG-2020 Mini 20w PEP QRP Xcvr .....	599.95	
52-96	SG-500 1.8-24MHz 12v 500w PEP amp	1195.00	999 <sup>95</sup>
56-40	SG-7200 DSP HF Smartmodem/Emailer	695.95	
70-07	PowerClear add-on DSP unit .....	395.00	359 <sup>95</sup>
54-12	SG-230 200w 1.8-30 MHz 12v Smartuner	595.00	489 <sup>95</sup>
54-61	25' extension cable .....	60.95	
54-62	50' extension cable .....	90.95	
54-63	SmartLock; tuners made after 9/1/93	59.95	
54-15	SG-235 500w 1.8-30MHz 12v Smartuner	1595.00	1169 <sup>95</sup>
54-16	SmartPro 200w 1.6-30MHz 12v tuner †	995.00	599 <sup>95</sup>
54-17	SG-231 HF+6m 12v Smartuner .....	595.00	529 <sup>95</sup>
55-04	SG-103 1.8-30MHz 150w dipole ..Δm	249.50	199 <sup>95</sup>
55-06	SG-104 2-28 MHz 90' 1kw dipole .....	700.00	629 <sup>95</sup>
55-27	SG-303 1.8-30 9' mobile whip & mt .	495.00	449 <sup>95</sup>
55-67	Replacement whip for SG-303 .....	225.00	199 <sup>95</sup>



# PRICE LIST

## SGC - continued

	Reg	Sale
55-45 QMS Quick universal mt system .Δmf	490.00	369 <sup>95</sup>
55-46 QMS-1 Quick mt system w/SG230 Dm	1085.00	789 <sup>95</sup>
55-47 QMS-2 Quick mt sys w/SG-230/303 whip	1580.00	895 <sup>95</sup>
55-48 QMS-3 500w antenna system	2580.00	2169 <sup>95</sup>
55-49 QMS-7 Quick mt sys w/SG-231/307 whip	1430.00	1299 <sup>95</sup>
56-15 External ARQ/FEC system	1200.00	1069 <sup>95</sup>

## SANGEAN (SAN)

ATS-202 AM/FM/SW port receiver .....Dwfv	\$139.00	89 <sup>95</sup>
ATS-303 AM/FM/shortwave portable receiver	119.00	89 <sup>95</sup>
ATS-606A AM/FM/shortwave portable receiver	249.00	169 <sup>95</sup>
ATS-818 AM/FM/shortwave portable receiver	299.00	179 <sup>95</sup>
ATS-818CS AM/FM/SW port Rcvr w/cassette	359.00	229 <sup>95</sup>
ATS-909 AM/FM/shortwave portable receiver	389.00	279 <sup>95</sup>
DT-200V AM/FM/VHF TV sound dig port Rcvr	79.95	
SR-77 AM/FM micro sized receiver	34.95	

## SEQUOIA (SEQ)

POCKET PC REF Pocket PC reference book ...	\$ 14.95	
POCKET REF Pocket reference book	9.95	

## SHURE (SHU)

526T Series II Dynamic amplified desk mic	\$129.00	119 <sup>95</sup>
R96 Replacement cartridge	26.95	

## SMILEY ANTENNA (SMI)

270A 2m/440 gain telescopic whip	\$ 19.95	
270A/SMA 2m/440 gain tele whip w/SMA	19.95	
5/8 SLD-2 2m 3/4 Slim Duck rubber ant	17.95	
5/8 SLD-220 220 3/4 Slim Duck rubber ant	17.95	
5/8 SLD-440 440 3/4 Slim Duck rubber ant	17.95	
5/8 SLD-2 Combo 2m 3/4 duck & stubby ant	24.95	
5/8 SLD-220 Combo 220 3/4 duck & stubby ant	24.95	
5/8 SLD-440 Combo 440 3/4 duck & stubby ant	24.95	
FLX 1/2 WAV-2M 1/2 wv 2m BNC whip/flex coil	25.95	
RD-2 2m rubber duck antenna	14.95	
RD-220 220 rubber duck antenna	14.95	
RDMD-2 2m mini rubber duck antenna	14.95	
RDMD-220 220 mini rubber duck antenna	14.95	
RDMD-440 440 mini rubber duck antenna	14.95	
RDS-2 2m stubby rubber duck antenna	14.95	
RDS-220 220 stubby rubber duck antenna	14.95	
RDS-440 440 stubby rubber duck antenna	14.95	
SD-2 2m Slim Duck thin rubber antenna	14.95	
SD-220 220 Slim Duck thin rubber antenna	14.95	
SL-440 440 slimline type duck	12.95	
SS-II Super Stick 2m 3/4 wv telescopic ant	19.95	
SS-III Super Stick 220 3/4 wv telescopic ant	19.95	
SS-IV Super Stick 440 3/4 wv telescopic ant	19.95	
SS-II/Combo 2m 3/4 wv telescopic & stubby ant	26.95	
SS-III/Combo 220 3/4 wv telescopic & stubby ant	26.95	
SS-IV/Combo 440 3/4 wv telescopic & stubby ant	26.95	
TAQ-2 2m 1/4 wave stainless whip	10.95	
TAQ-220 220 1/4 wave stainless whip	10.95	
TAQ-440 440 1/4 wave stainless whip	10.95	
TS Thin Stick 2m/220 3/4 wave telescopic whip	16.95	

## SOLARCON (SOL)

A-99 10m fiberglass base station antenna ..	\$ 74.95	64 <sup>95</sup>
GP-K1 Ground plane radial kit	39.95	

## SOLDER-IT (SLD)

ALP-21D Alum solder paste, 7.1gm ...Δmwfv	\$ 6.00	3 <sup>95</sup>
SP-7D Solder paste, 7.1 gm	6.95	4 <sup>95</sup>

## SONY (SON)

INT-W100 WebTV Internet Terminal .....Dwfv	\$299.95	199 <sup>95</sup>
\$100 rebate from WebTV (90 days svc) thru 12/31/97		
RM-KW100 Wireless infrared keybd Δmwfv	99.95	79 <sup>95</sup>
RFU-W100 RF adaptor .....Δmwfv	49.95	39 <sup>95</sup>

## SHORTWAVE

ICF-2010 AM/FM/SW/LW/air port Rcvr w/ps ..	\$449.95	359 <sup>95</sup>
ICF-SW10 AM/FM/SW compact receiver	64.95	49 <sup>95</sup>
ICF-SW15 AM/FM/SW port receiver .....Dmv	89.95	49 <sup>95</sup>
ICF-SW30 AM/FM/SW portable receiver	139.95	99 <sup>95</sup>

## SONY - continued

ICF-SW33 AM/FM/SW port receiver .....Dw	199.95	149 <sup>95</sup>
ICF-SW40 AM/FM/SW port receiver .....Δmwfv	169.95	99 <sup>95</sup>
ICF-SW55 AM/FM/SW port receiver .....Δmwfv	449.95	299 <sup>95</sup>
ICF-SW77 AM/FM/SW portable receiver	649.95	469 <sup>95</sup>
ICF-SW100S AM/FM/SW portable receiver	479.95	349 <sup>95</sup>
ICF-SW1000T AM/FM/SW port Rcvr w/cassette	699.95	549 <sup>95</sup>
ICF-SW7600G AM/FM/SW portable receiver ..	239.95	189 <sup>95</sup>
AC-E60HG 6vdc 400ma AC adapter	22.99	
AN-1 LW/MW/SW outdoor active rcv ant	119.95	99 <sup>95</sup>
AN-3 Aircraft active receive ant .....Δmwfv	99.95	49 <sup>95</sup>
AN-102 LW/MW/SW indoor active rcv ant	89.95	79 <sup>95</sup>
FDT-58X5 5" color AC/DC television .....Dm		149 <sup>95</sup>

## STANDARD (STA)

C-156A 2m FM HT w/AA battery holder	\$289.00	199 <sup>95</sup>
CAW-151B 12vdc power supply cable	18.95	
CAW-152B Cig cord w/filter	28.95	
CHP-111 Headset mic w/PTT switch	48.95	
CHP-150 Headset mic w/VOX	87.95	
CMB-600 Helmet clip for CHP-150	14.95	
CLC-157 Soft case; CNB-157	23.95	
CMB-112 Mounting bracket	27.95	
CMC-150 Mobile charger	28.95	
CMP-111 Speaker/mic	58.95	
CMP-113 Tie-pin spkr/mic .....Δmv	48.95	39 <sup>95</sup>
CMP-115 Mini speaker/mic	53.95	
CNB-155 4.8v 600ma 2.5w nicad battery ..	30.95	
CNB-156 6v 600ma 2.5w nicad battery	33.95	
CNB-157 9.6v 600ma 5w nicad battery	42.95	
CNB-158 6v 1200ma 2.5w nicad battery	44.95	
CSA-181AB Desk rapid charger	82.95	
CTN-115 CTCSS decoder	70.95	
CWC-156A Wall cgr; CNB155/156/157/158	9.95	
C-558A 2m/440 FM HT/batt/cgr/TTP/CTCSS ..	665.00	549 <sup>95</sup>

\$30 instant coupon - C-558A thru 12/31/97 OR

FREE CMP-115 from Standard - C-558A thru 12/31/97

C-568A 2m/440/1.2 FM HT/batt/cgr/TTP/CTCSS	699.00	599 <sup>95</sup>
C-628A 440/1.2 FM HT/batt/cgr/TTP/CTCSS ..	727.00	659 <sup>95</sup>
CAX-02 Bottom cover	12.95	
CAX-03 Bottom cover	12.95	
CAW-150 Mobile power supply cable	18.95	
CAW-151 12vdc power supply cable	14.95	
CAW-152 Cig cord w/filter	30.95	
CBT-151 Battery case	22.95	
CBT-171 6 cell battery case	21.95	
CBT-175 2 cell battery case .....Δmwfv	17.00	6 <sup>95</sup>
CHP-111 Headset mic w/PTT switch	48.95	
CHP-150 Headset mic w/VOX	87.95	
CMB-600 Helmet clip for CHP-150	14.95	
CLC-152 Lrg case; C158A/CNB152/153 Δm	26.00	16 <sup>95</sup>
CLC-171 Soft case for CNB-171	30.95	
CLC-172 Soft case for CNB-172/173	30.95	
CLC-175 Soft case for CBT-175	30.95	
CLC-520 Std carrying case; 228A/528A	26.95	
CLC-521 Large carrying case; 228A/528A	29.95	
CLC-550 Standard carrying case; 558A	29.95	
CLC-555OR Orange carrying case	35.95	
CLC-560 Case; CBT-171/CNB-171; C-568A	27.95	
CLC-561 Case; CNB-172/173 with C-568A	27.95	
CLC-562 Leather case; CBT-171/CNB-171	52.95	
CMB-111 Mobile bracket	22.95	
CMB-112 Mounting bracket	27.95	
CMC-150 Mobile charger	28.95	
CMP-111 Speaker/mic	58.95	
CMP-115 Mini speaker/mic	53.95	
CMP-123 Ear phone spkr/mic	63.95	
CMU-161 200 channel memory	48.95	
CNB-151 Extra 7.2v 700ma nicad batt	82.95	
CNB-152 12v 600ma nicad battery	99.95	
CNB-153 7.2v 1000ma nicad battery	99.95	
CNB-171 7.2v 700ma nicad battery Δmwv	80.95	59 <sup>95</sup>
CNB-172 12v 600ma nicad battery	127.00	119 <sup>95</sup>
CNB-173 7.2v 1100ma nicad battery	99.00	94 <sup>95</sup>
CSA-181A Desk rapid charger	128.00	119 <sup>95</sup>

## STANDARD - continued

CWC-156A Wall cgr; CNB-152/162/172	9.95	
C-168A Dlx submini 2m HT/batt/cgr/TT	Δwv	469.00 279 <sup>95</sup>
CAX-03 Bottom cover		12.95
CBT-160 Battery case	.....Dw	21.95
CBT-171 6 cell battery case		21.95
CHP-111 Headset mic w/PTT switch		48.95
CHP-150 Headset mic w/VOX		87.95
CMB-600 Helmet clip for CHP-150		14.95
CLC-160 Mini carrying case		26.95
CLC-161 Mini carrying case		27.95
CLC-162 Mini carrying case .....Δmv		28.95 19 <sup>95</sup>
CMP-111 Speaker/mic		58.95
CMP-115 Mini speaker/mic		53.95
CMP-123 Ear phone spkr/mic		63.95
CMU-161 200 channel memory		48.95
CNB-160 Mini 6v 300ma nicad .....Δmwfv		72.00 29 <sup>95</sup>
CNB-161 Mini 7.2v 700ma nicad battery ..		78.95
CNB-162 Mini 12v 600ma nicad .....Δmwv		130.00 99 <sup>95</sup>
CNB-163 Mini 7.2v 1000ma nicad .....Δmwv		95.95 69 <sup>95</sup>
CSA-181A Desk rapid charger		128.00 119 <sup>95</sup>
CBT-181 Battery case for 4 AA; 188/288 Δwfv		18.95
CBT-182 Battery case for 5 AA; 188/288 Δwv		28.95
CLC-181 Carrying case; CNB181/188A Δmv		23.95 19 <sup>95</sup>
CLC-182 Carrying case/CNB182/3/4/188 Δv		25.95
CMA-181 Mobile adapter; C-188A/288A Δm		42.95
CMU-182 200 ch memory; 188A/288A Δmwv		48.95
CNB-181 4.8v 700ma nicad batt; 188 Δmwv		59.95 49 <sup>95</sup>
CNB-182 9.6v 600ma batt; 188A/288A Δmwv		115.00 99 <sup>95</sup>
CNB-183 6v 1100ma batt; 188A/288A Δmwv		97.00 79 <sup>95</sup>
CNB-184 6v 700ma batt; 188A/288A Δmwv		69.95
C-108A 200mw 2m FM HT		269.00 229 <sup>95</sup>
\$20 instant coupon - C-108A thru 12/31/97 OR		
FREE CMP-115 from Standard - C-108A thru 12/31/97		
C-508A 280mw 2m/440 FM HT		345.00 289 <sup>95</sup>
CBH-160 Molded belt clip		12.95
CHP-111 Headset mic w/PTT switch		48.95
CHP-150 Headset mic w/VOX		87.95
CMB-600 Helmet clip for CHP-150		14.95
CLC-401 Standard soft case; C-108A		16.95
CLC-402 Dlx soft case w/belt loop; C-108A		23.95
CLC-502 Standard soft case; C-508A		18.95
CLC-503 Deluxe soft case; C-108A/508A		19.95
CMP-111 Speaker/mic		58.95
CMP-115 Mini speaker/mic		53.95
CMP-123 Ear phone spkr/mic		63.95
CNB-401 Nicad battery		22.95
CSA-401A Desk charger		48.95
C-510A 2m/440 FM HT		359.00 309 <sup>95</sup>
CHP-111 Headset mic w/PTT switch		48.95
CHP-150 Headset mic w/VOX		87.95
CMB-600 Helmet clip for CHP-150		14.95
CLC-510 Standard soft case; C-510A		29.95
CMA-510A Mobile adapter; C-510A		99.95
CMP-115 Mini speaker/mic		53.95
CMP-123 Ear phone spkr/mic		63.95
CMP-127 Microphone for C-510A		69.95
CNB-510 3.6v 700ma nicad batt; C-510A		33.95
CSA-510A Rapid desk charger for C-510A		89.95
CSK-15 External speaker		47.95
C-1208DA 50w 2m FM Xcvr w/TTP		549.00 479 <sup>95</sup>
CAW-561 6.5' mic extension cable		36.95
CAW-562 13' mic extension cable		48.95
C-5718DA 50/40w 2m/440 FM Xcvr/packet ..		849.00 719 <sup>95</sup>
CAW-570 Split cable for microphone		63.95
CAW-571 6.5' mic extension cable		49.95
CAW-572 13' mic extension cable		54.95
CAW-579 Packet cable		32.95
CRC-5700 Front panel w/freq display		239.00 219 <sup>95</sup>
CAW-573 6.5' front panel extension cable		28.95
CAW-574 13' front panel extension cable		39.95
C-5900DA 45w 6m/50w 2m/35w 440 FM/TTP		1049.00 889 <sup>95</sup>
CAW-590 Split cable for mic		55.95
CAW-591 10' extension cable; LCD display		40.95
CAW-592 16' extension cable; mic/speaker		57.95



## STANDARD - continued

CAW-593 26' extension cable; mic/speaker	74.95
CMB-5900 Mounting bracket for display	27.95
CMU-161 200 channel memory	48.95
CSK-12 External speaker	47.95
CSK-15 External speaker	47.95
CCR-708A 50-905MHz spectral disp Rcvr/cell blkd	759.95

## STARTEK (STR)

1350 1-1300 MHz frequency counter	\$139.00	129 <sup>95</sup>
ATH-15 1-1500MHz bar graph freq counter	235.00	189 <sup>95</sup>
ATH-30 1-2800MHz bar graph ctr w/1-shot	299.00	249 <sup>95</sup>
ATH-30/HS 2800MHz/1-shot/hi-stability	424.00	349 <sup>95</sup>
ATH-50 5Hz-2800MHz bar/auto trig/hi speed	339.00	299 <sup>95</sup>
ATH-50/HS 2800MHz/trig/hi spd/hi stability	464.00	399 <sup>95</sup>
APA-9/PA-9 9vdc auto power adapter	7.95	
RD-2750 27-50MHz rubber duck antenna	19.95	
RD-150 150MHz rubber duck antenna	16.95	
RD-450 450MHz rubber duck antenna	16.95	
RD-800 800MHz rubber duck antenna	16.95	
TA-90 Telescopic antenna	12.95	
TA-90L Right angle telescopic antenna	16.95	
DC-5 BNC to clip leads cable	12.95	
M-207-IC Interface cable	10.95	
CC-90 Carrying case	12.95	
BP-150 130 - 500 MHz bandpass filter	49.95	
HP-400 400 - 1500 MHz bandpass filter	49.95	
HP-800 800 MHz - 2 GHz bandpass filter	49.95	
LP-60 DC - 60 MHz bandpass filter	49.95	
DC-10 Direct probe	22.95	
LP-22 Lo-pass probe	29.95	
P-60 Probe, 60 MHz scope, 200 MHz FC	29.95	
P-100 Probe, 100 MHz scope, 300 MHz FC	39.95	
P-110 Probe, 200MHz scope, 500 MHz FC	69.00	49 <sup>95</sup>

## TAB Books (TAB)

447748 Shortwave Listener's Q & A Book Dm	\$ 14.95	12 <sup>95</sup>
633626 Radio Amateur's Dig Comm Handbk Dmv	14.95	
640967 Amateur Radio Encyclopedia	29.95	
641351 Shortwave Radio Listening for Beginners	12.95	
643478 Complete SW Listener's Handbook	21.95	
643540 Beginner's Handbook of Amateur Radio	24.95	
765340 Build Your Own SW Antennas Dmw	16.95	

## TIMEWAVE/AEA

### TIMEWAVE (TIM)

DSP-9 PLUS Advanced dig sig processing unit	\$209.95
DSP-59 PLUS Dlx dig signal processing unit	269.95
DSP-599zx All-mode DSP noise filter	399.95
DSP-59Y DSP filter module for Yaesu SP-5/6	389.95

\$25 factory rebate - DSP-59Y thru 12/31/97

(AEA) AC-4 12vdc 1.5A power supply	19.95
Upgrade 3.0 DSP-9 to version 3.0 kit	30.95

### TIMEWAVE/AEA DATA/SOFTWARE (AEA)

DC-1 Cigarette lighter cord	\$ 7.95
KK-1 Keyboard keyer for IBM PC	199.95
KKCOM Optional utility program	Dw 49.95
PK-12 1200 bps VHF/UHF packet controller	99.95
100K/PK-12 100K MailDrop upgrade; PK12	39.95
AC-1 12vdc 600 ma adaptor	15.95
PK-96/18K 9600 baud packet controller/32K RAM	169.95
100K 100K memory upgrade for PK-96	39.95
PK-96/100K 9600 baud control/128K RAM	199.95
AC-1 12vdc 600 ma adaptor	15.95
PC Pakratt Lite Packet only terminal prog	49.95
DSP-232 Multi-mode data controller	399.95
DSP-1232 Single port multi-mode controller Dfv	850.00
DSP-2232 Switchable ch multi-mode control	499.95
9600 bps modem card option for PK-900	75.95
AC-4 12vdc 1.5A power supply	19.95
ACARS Aircraft data reception software	90.95
ACARS/900 Air data reception soft; PK900	50.95
AEA-FAX III-900 PK-900/IBM FAX software	75.95
PC-Pakratt II w/FAX IBM prog; 12/88/232	69.95
PC-Pakratt for Windows 2.0 IBM; 12/88/232	79.95
Log Windows 3.0 Program for IBM	49.95

## TIMEWAVE/AEA - continued

IH CABLE PK-232 - Ico/Yae/Alf HT	Dwfv 25.95	19 <sup>95</sup>
IM CABLE PK232 - Ico 8pin mic cbl	Dmwfv 25.95	19 <sup>95</sup>
IW CABLE PK232 - Icom W2A cable	Dmwfv 25.00	14 <sup>95</sup>
KH CABLE PK-232 - Ken HT cable	Dmwfv 25.95	19 <sup>95</sup>
KM CABLE PK-232 - Ken/Alf 8-pin mic	Df 25.95	
YM CABLE PK-232 - Yae 8pin mic cbl	Dmf 25.95	19 <sup>95</sup>
Technical manual; PK-232MBX	25.95	
WeFax-256 WX FAX prog; DSP1232/2232	129.95	
AA.COM SWR curve IBM soft; 121 & V/U Dmfv	75.00	59 <sup>95</sup>
AEA-FAX III Facsimile & wire photo program	149.95	99 <sup>95</sup>
DM-1 2m/220/440 FM deviation meter	169.95	
IDR-96 5w 441.05MHz data Xcv/9600 Δmwfv	499.00	399 <sup>95</sup>
Morse University II Morse code Windows soft	39.95	
PCB-88 IBM plug-in packet adapter	Dmwfv 179.00	99 <sup>95</sup>

## TRIPP LITE (TRI)

PR-7 5A power supply, 7A surge	\$ 55.00	49 <sup>95</sup>
PR-10 7.5A power supply, 10A surge	79.00	69 <sup>95</sup>
PR-12 9A power supply, 12A surge	85.00	74 <sup>95</sup>
PR-20 16A power supply, 20A surge	125.00	99 <sup>95</sup>
PR-30 24A power supply, 30A surge	172.00	129 <sup>95</sup>
PR-40 32A power supply, 40A surge	211.00	169 <sup>95</sup>
PR-50 37A power supply, 50A surge	262.00	199 <sup>95</sup>
PR-60 48A power supply, 60A surge	309.00	239 <sup>95</sup>
TL-11 Trim Line small low prof 8A ps, 11A surge	85.00	69 <sup>95</sup>
TLC-11 Trim Line lg low prof 8A ps, 11A surge	97.00	79 <sup>95</sup>
BC PERS-280 Standby UPS 280VA	Δmwfv 129.00	79 <sup>95</sup>
BC PERS-420 Standby UPS 420VA	Δmwfv 175.00	119 <sup>95</sup>
BC INTERNET-325 Stdbyp UPS 325VA	Δmwv 165.00	109 <sup>95</sup>
BC INTERNET-450 Stdbyp UPS 450VA	Δmwv 199.00	129 <sup>95</sup>
BC INTERNET-675 Stdbyp UPS 675VA	Δmwv 299.00	189 <sup>95</sup>
IBAR-12 Rack mt 12-out surge suppress	Δmwv 169.00	69 <sup>95</sup>
ISOBAR-4 4 outlet premium surge suppressor	79.95	49 <sup>95</sup>
ISOBAR-6 6 outlet premium surge suppressor	99.95	59 <sup>95</sup>
ISOBAR-8 ULTRA 8 outlet surge suppressor/LEDs	116.95	79 <sup>95</sup>
MT-6+ 6 outlet console surge suppressor	149.95	99 <sup>95</sup>
SUPER-7 7 outlet surge suppressor	27.95	
SUPER-7+TEL 7 outlet/fax modem surge	38.95	
TR-6 Surge Alert 6 out super suppressor Δmwfv	59.95	29 <sup>95</sup>
TR-6FM Surge Alert+Tel 6 out super suppressor	69.95	59 <sup>95</sup>

## TUBES (TUB)

6146W Tube	\$ 26.95
12BY7A Tube	12.95
3-500G High dissipation tube (3-500Z)	119.95
3-500Z	199.95
572B For Yaesu, etc.	49.95
811A For Collins, etc.	19.95

Also see EIMAC

## TUNE BELT (TUN)

HH-1PS Up to 5" HT radio belt	\$ 19.95
HH-1PM Up to 6" HT radio belt	19.95
HH-1PL Up to 7" HT radio belt	19.95
HH-2PM Up to 6" HT radio belt w/batt pocket	21.95
HH-2PL Up to 8" HT radio belt w/batt pocket	21.95

## US TOWER (UST)

### FREE STANDING CRANK-UPS (T'X not recommended)

TX-438 38' crank-up tower	T 1269.00	1142 <sup>95</sup>
TX-455 55' crank-up tower	T 1915.00	1399 <sup>95</sup>
TX-472 72' crank-up tower	T 3147.00	2832 <sup>95</sup>
TX-472MDP 72' crank-up w/motor drive	T 5064.00	3899 <sup>95</sup>
TX-489 89' crank-up tower	T 5475.00	4927 <sup>95</sup>
TX-489MDPL 89' crank-up w/motor drive	T 8212.00	7390 <sup>95</sup>
TX-3106MDPLSP 106' crank-up/mot drive	T 12999.00	11699 <sup>95</sup>

### FREE STANDING HEAVY DUTY CRANK-UP TOWERS

HDX-538 38' crank-up tower	T 1642.00	1477 <sup>95</sup>
HDX-555 55' crank-up tower	T 2874.00	2099 <sup>95</sup>
HDX-572 72' crank-up tower	T 4927.00	4434 <sup>95</sup>
HDX-572MDPL 72' crank-up w/motor drive	T 7528.00	6775 <sup>95</sup>
HDX-589MDPL 89' crank-up w/motor drive	T 9855.00	8869 <sup>95</sup>
HDX-689MDPL 89' HD crank-up w/motor	T 19039.00	17135 <sup>95</sup>
HDX-5106MDPL 106' HD crank-up w/motor	T 20719.00	18647 <sup>95</sup>

## US TOWER - continued

COMPACT TMM (Top mount rotor for full retraction)		
TMM-433SS 33' crank-up tower	T 1355.00	1219 <sup>95</sup>
TMM-433HD 33' HD crank-up tower	T 1642.00	1477 <sup>95</sup>
TMM-541SS 41' crank-up tower	T 1779.00	1599 <sup>95</sup>

### ACCESSORIES FOR CRANK-UP TOWERS

<b>CX-2</b>	Coax arms (2) for 2-section tower .....	\$ 55.95	
<b>CX-3</b>	Coax arms (3) for 3-section tower .....	77.95	
<b>CX-4</b>	Coax arms (4) for 4-section tower .....	122.95	
<b>CX-5</b>	Coax arms (5) for 5-section tower .....	167.00	<b>150<sup>95</sup></b>
<b>CX-6</b>	Coax arms (6) for 6-section tower .....	212.00	<b>190<sup>95</sup></b>
<b>HDP</b>	Service platform .....	T 904.00	<b>813<sup>95</sup></b>
<b>STS-4</b>	Rotor accessory for TX/TMM towers ...T	235.00	<b>211<sup>95</sup></b>
<b>IV-16</b>	Inverted vee arm for MA's .....	41.95	
<b>M-5</b>	2" OD 5' mast extension for MA's .....	40.95	
<b>M-10</b>	2" OD 10' mast .....	T 77.95	
<b>M-15</b>	2" OD 15' mast .....	T 115.95	
<b>M-20</b>	2" OD 20' mast .....	T 152.00	<b>136<sup>95</sup></b>
<b>M-15R</b>	2" OD 15' reinforced mast .....	T 174.00	<b>156<sup>95</sup></b>
<b>M-20R</b>	2" OD 20' reinforced mast .....	T 230.00	<b>207<sup>95</sup></b>
<b>MD-75</b>	Heavy duty 1 HP motor drive .....	T 1108.00	<b>997<sup>95</sup></b>
<b>MDP-75*</b>	Pull-down drive; TX-472/HDX-555 T	1724.00	<b>1551<sup>95</sup></b>
<b>MDPL-75*</b>	Pull-down drive; HDX-572 .....	T 2340.00	<b>2106<sup>95</sup></b>
*Requires MCL-100 or RMC-1000 also			

\*Requires MCL-100 or RMC-1000 also

MRF Mast raising fixture	298.00	268 <sup>95</sup>
MCL-100 Limit switch package	517.00	465 <sup>95</sup>
RMC-1000 Remote control w/limit switch	1108.00	997 <sup>95</sup>
RP-3 Rotor plate for 10" section	39.95	
RP-4 Rotor plate for 12 1/2" section	47.95	
RP-5 Rotor plate for 15" section	52.95	
TRX-80 Raising fixture; TX-438/455; HDX-538/555 T	483.00	434 <sup>95</sup>
TRX-80HD Raising fixture; TX-472/489; HDX-572/589 T	635.00	571 <sup>95</sup>
TRX-100HD Raising fixture; HDX-689/5106 T	895.00	805 <sup>95</sup>
TB-2US Thrust bearing; 2" mast w/2 flange holes	110.95	

### MA-SERIES TUBULAR TOWERS

MA-40 40' crank-up mast	T 1007.00	679 <sup>95</sup>
MA-550 55' crank-up mast	T 1704.00	1069 <sup>95</sup>
MA-550MDP 55' crank-up mast w/motor	T 3258.00	2932 <sup>95</sup>
MA-770 70' crank-up mast	T 2810.00	2529 <sup>95</sup>
MA-770MDP 70' crank up mast w/motor	T 4445.00	3999 <sup>95</sup>
MA-850 85' crank-up mast	T 4344.00	3909 <sup>95</sup>
MA-850MDP 85' crank-up mast w/motor	T 5991.00	5391 <sup>95</sup>

### MA-SERIES ACCESSORIES

<b>CX-2M</b> Coax arms (2) for MA-40 .....	\$ 59.95	
<b>CX-3M</b> Coax arms (3) for MA-550 .....	88.95	
<b>CX-4M</b> Coax arms (4) for MA-770 .....	148.00	<b>133<sup>95</sup></b>
<b>CX-5M</b> Coax arms (5) for MA-850 .....	178.00	<b>160<sup>95</sup></b>
<b>MAB-40</b> Hinged base for MA-40 .....T	402.00	<b>361<sup>95</sup></b>
<b>MAB-550</b> Hinged base for MA-550 .....T	480.00	<b>432<sup>95</sup></b>
<b>MAB-770</b> Hinged base for MA-770 .....T	581.00	<b>522<sup>95</sup></b>
<b>MAB-850</b> Hinged base for MA-850 .....T	704.00	<b>633<sup>95</sup></b>
<b>MAF-40</b> Raising fixture for MA-40 .....	246.00	<b>221<sup>95</sup></b>
<b>MAF-550</b> Raising fixture for MA-550 .....T	340.00	<b>306<sup>95</sup></b>
<b>MAF-770</b> Raising fixture for MA-770 .....T	346.00	<b>311<sup>95</sup></b>
<b>MAF-850</b> Raising fixture for MA-850 .....T	458.00	<b>412<sup>95</sup></b>
<b>MARB-40</b> Rotor base accessory for MA-40 ..T	615.00	<b>553<sup>95</sup></b>
<b>MARB-550</b> Rotor base accessory for MA-550 T	727.00	<b>654<sup>95</sup></b>
<b>MARB-770</b> Rotor base accessory for MA-770 T	861.00	<b>774<sup>95</sup></b>
<b>MARB-850</b> Rotor base accessory for MA-850 T	1018.00	<b>916<sup>95</sup></b>

All US TOWER products are drop-shipped (shipped direct to you from the US TOWER factory). On these factory drop-shipments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Visalia, California via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.



# PRICE LIST

	Reg	Sale
<b>UNADILLA</b> (See W2AU)		
<b>Unified Microsystems</b> (UNM)		
W9XT Contest card for IBM PC & compatible	\$149.95	
CCC-4 4pin mic contest card cable semi-kit	44.95	
CCC-8 8pin mic contest card cable semi-kit	44.95	

	Reg	Sale
<b>Universal Towers</b> (UNT)		
4-30 4 sq ft wind load 30' alum tower	\$348.00	313 <sup>95</sup>
9-30 9 sq ft wind load 30' alum tower	469.00	422 <sup>95</sup>
12-30 12 sq ft wind load 30' alum tower	616.00	554 <sup>95</sup>
21-30 21 sq ft wind load 30' alum tower	732.00	658 <sup>95</sup>
23-30 23 sq ft wind load 30' alum tower	969.00	872 <sup>95</sup>
35-30 35 sq ft wind load 30' alum tower	1092.00	982 <sup>95</sup>

4-40 4 sq ft wind load 40' alum tower	584.00	525 <sup>95</sup>
7-40 7 sq ft wind load 40' alum tower	734.00	660 <sup>95</sup>
9-40 9 sq ft wind load 40' alum tower	818.00	736 <sup>95</sup>
12-40 12 sq ft wind load 40' alum tower	969.00	872 <sup>95</sup>
15-40 15 sq ft wind load 40' alum tower	1083.00	974 <sup>95</sup>
21-40 21 sq ft wind load 40' alum tower	1203.00	1082 <sup>95</sup>
23-40 23 sq ft wind load 40' alum tower	1440.00	1296 <sup>95</sup>
4-50 4 sq ft wind load 50' alum tower	823.00	740 <sup>95</sup>
5-50 5 sq ft wind load 50' alum tower	936.00	842 <sup>95</sup>
7-50 7 sq ft wind load 50' alum tower	1053.00	947 <sup>95</sup>
9-50 9 sq ft wind load 50' alum tower	1171.00	1053 <sup>95</sup>
15-50 15 sq ft wind load 50' alum tower	1555.00	1399 <sup>95</sup>
16-50 16 sq ft wind load 50' alum tower	1678.00	1510 <sup>95</sup>

4-60 4 sq ft wind load 60' alum tower	1172.00	1054 <sup>95</sup>
6-60 6 sq ft wind load 60' alum tower	1437.00	1293 <sup>95</sup>
7-60 7 sq ft wind load 60' alum tower	1529.00	1376 <sup>95</sup>
9-60 9 sq ft wind load 60' alum tower	1640.00	1476 <sup>95</sup>
3-70 3 sq ft wind load 70' alum tower	1527.00	1374 <sup>95</sup>
4-70 4 sq ft wind load 70' alum tower	1877.00	1689 <sup>95</sup>
6-70 6 sq ft wind load 70' alum tower	1911.00	1719 <sup>95</sup>
7-70 7 sq ft wind load 70' alum tower	1996.00	1796 <sup>95</sup>
3-80 3 sq ft wind load 80' alum tower	2059.00	1853 <sup>95</sup>
4-80 4 sq ft wind load 80' alum tower	2384.00	2145 <sup>95</sup>
2-90 2 sq ft wind load 90' alum tower	2470.00	2223 <sup>95</sup>

B-14 Base for tower	65.95	
B-18 Base for tower	65.95	
B-22 Base for tower	110.28	99 <sup>95</sup>
B-26 Base for tower	141.78	127 <sup>95</sup>

Extra 14" stubs (between base & tower)	.set	12.95
Extra 18" stubs (between base & tower)	.set	24.95
Extra 22" stubs (between base & tower)	.set	40.95
Extra 26" stubs (between base & tower)	.set	40.95
Extra 30" stubs (between base & tower)	.set	60.95

RFM-11 Flat roof mt for guyed tower	44.95	
RFM-14 Flat roof mt for guyed tower	44.95	
RFM-18 Flat roof mt for guyed tower	69.95	
RFM-22 Flat roof mt for guyed tower	103.95	93 <sup>95</sup>
RFM-26 Flat roof mt for guyed tower	138.66	124 <sup>95</sup>
R-11 Rotor mount	31.95	
R-14 Rotor mount	47.95	
R-18 Rotor mount	63.95	

SEE LITERATURE FOR CONFIGURATION OF TOWERS		
11 Top 11" top tower section	T	118.20 106 <sup>95</sup>
14 Top 14" top tower section	T	148.94 134 <sup>95</sup>
18 Top 18" top tower section	T	270.10 243 <sup>95</sup>
14 Taper 14" taper tower section	T	131.04 117 <sup>95</sup>
18 Taper 18" taper tower section	T	235.04 211 <sup>95</sup>
22 Taper 22" taper tower section	T	350.48 315 <sup>95</sup>
26 Taper 26" taper tower section	T	471.12 424 <sup>95</sup>
11 Straight 11" straight tower section	T	116.48 104 <sup>95</sup>
14 Straight 14" straight tower section	T	131.04 117 <sup>95</sup>
18 Straight 18" straight tower section	T	235.04 211 <sup>95</sup>
22 Straight 22" straight tower section	T	350.48 315 <sup>95</sup>
26 Straight 26" straight tower section	T	471.12 424 <sup>95</sup>
HD35-40 35 sq ft wind load 40' alum tower	T	1681.00 1512 <sup>95</sup>
HD21-50 21 sq ft wind load 50' alum tower	T	1793.00 1613 <sup>95</sup>
HD9-60 9 sq ft wind load 60' alum tower	T	1880.00 1692 <sup>95</sup>

	Reg	Sale
<b>UNIVERSAL - continued</b>		
HD16-60 16 sq ft wind load 60' alum tower	T 2265.00	2038 <sup>95</sup>
HD21-60 21 sq ft wind load 60' alum tower	T 2386.00	2147 <sup>95</sup>
HD8-70 8 sq ft wind load 70' alum tower	T 2115.00	1903 <sup>95</sup>
HD12-70 12 sq ft wind load 70' alum tower	T 2620.00	2358 <sup>95</sup>
HD17-70 17 sq ft wind load 70' alum tower	T 2858.00	2572 <sup>95</sup>
HD21-70 21 sq ft wind load 70' alum tower	T 2978.00	2680 <sup>95</sup>
HD8-80 8 sq ft wind load 80' alum tower	T 2707.00	2436 <sup>95</sup>
HD9-80 9 sq ft wind load 80' alum tower	T 2824.00	2541 <sup>95</sup>
HD11-80 11 sq ft wind load 80' alum tower	T 3208.00	2887 <sup>95</sup>
HD12-80 12 sq ft wind load 80' alum tower	T 3213.00	2891 <sup>95</sup>
HD16-80 16 sq ft wind load 80' alum tower	T 3449.00	3104 <sup>95</sup>
HD4-90 4 sq ft wind load 90' alum tower	T 2818.00	2536 <sup>95</sup>
HD8-90 8 sq ft wind load 90' alum tower	T 3325.00	2992 <sup>95</sup>
HD11-90 11 sq ft wind load 90' alum tower	T 3802.00	3421 <sup>95</sup>
HD4-100 4 sq ft wind load 100' alum tower	T 3775.00	3397 <sup>95</sup>
HD8-100 8 sq ft wind load 100' alum tower	T 4039.00	3635 <sup>95</sup>
B-30 Base for HD tower	221.50	199 <sup>95</sup>
RFM-30 Flat roof mt for guyed tower	193.98	174 <sup>95</sup>

1-5/8SC Flange bearing	94.95	
2-3/16SC Flange bearing	120.64	108 <sup>95</sup>
Top Plate Flange plate welded to top section	23.95	

## SEE LITERATURE FOR CONFIGURATION OF TOWERS

30 Taper 30" taper tower section	T	592.80 533 <sup>95</sup>
30 Straight 30" straight tower section	T	592.80 533 <sup>95</sup>
1-1/4" OD x 5 ft aluminum mast	T	22.95
1-1/4" OD x 10 ft aluminum mast	T	31.95
1-1/2" OD x 10 ft aluminum mast	T	39.95
2" OD x 8 ft aluminum mast	T	47.95
2" OD x 16 ft aluminum mast	T	94.95

All UNIVERSAL TOWERS products are drop-shipped (shipped direct to you from the UNIVERSAL TOWERS factory). On these factory drop-shippments we prefer payment in full with order, however, we will accept your credit card with the understanding that we will process the charge when we order the merchandise from the factory. This means that you may be billed before you receive your drop-shipped merchandise. Shipment is FOB Mt. Clemens, Michigan via truck, COD for freight charges only. Freight charges will be collected upon delivery by the carrier. Please allow sufficient time for delivery on these special order products. Most truck lines will not unload the tower for you, so please be sure to have enough manpower and/or equipment on hand when your tower is delivered by the carrier.

	Reg	Sale
<b>VALOR</b> (See PRO AM)		
<b>VANCO</b> (VCO)		
SWR-1 SWR/power strength meter	\$ 36.14	19 <sup>95</sup>
SWR-2 SWR/power meter	50.15	29 <sup>95</sup>
SWR-3 Mini SWR meter	21.68	14 <sup>95</sup>

	Reg	Sale
<b>VAN GORDEN</b> (VAN)		
Hi-Q 1:1 balun	\$ 14.95	
Hi-Q 4:1 balun	14.95	
Antenna center insulator	6.95	
Antenna end insulator	4.95	
Dog bone type antenna insulator	.95	
NR-100 Nylon antenna guy rope	100 ft.	4.95
NR-1,000 Nylon ant guy rope	1,000 ft.	44.95
D-80 80m wire dipole antenna	32.95	
SD-80 Short 80m dipole	36.95	
D-40 40m wire dipole antenna	29.95	
SD-40 Short 40m dipole	34.95	
D-20 20m wire dipole antenna	28.95	
D-15 15m wire dipole antenna	27.95	
D-10 10m wire dipole antenna	26.95	
All Bander Dipole 160-10m (w/tuner)	135' ant	29.95
Shorty All Bander 160-10m (w/tuner)	70' ant	44.95
G5RV Flat-top 5-band 102' ant/xmfr/100' cable	50.95	
G5RV-E Flat-top 5-band 102' ant/31' cable	28.95	
G5RV JR Flat-top 4-band 52' ant/17' cable	24.95	
G5RV-M Flat-top 5-band 204' ant/65' cable	50.95	
N connector Type N connector for 9913	4.95	

450 ohm 18ga solid ladderline	100 ft.	12.95
450 ohm 18ga solid ladderline	1,000 ft.	110.00 99 <sup>95</sup>
450 ohm 14ga solid ladderline	100 ft.	24.95

	Reg	Sale
<b>VAN GORDEN - continued</b>		
450 ohm 14ga solid ladderline	1000 ft.	220.00 199 <sup>95</sup>
(WA1) WA1FLL Ladder-Loc 450 ohm ctr ins		12.95
RG-213 Non-contaminating	.....per ft.	49 <sup>95</sup>
RG-213/500 Non-contaminating .500 ft. Roll		199.95 179 <sup>95</sup>
8X-3ST 3' RG-8X coax/silver teflon PL259s	...	8.95
8X-6ST 6' RG-8X coax/silver teflon PL259s	...	10.95
8X-12ST 12' RG-8X coax/silver teflon PL259s	...	11.95
8X-25ST 25' RG-8X coax/silver teflon PL259s	...	15.95
8X-50ST 50' RG-8X coax/silver teflon PL259s	...	24.95
8X-75ST 75' RG-8X coax/silver teflon PL259s	...	31.95
8X-100ST 100' RG-8X coax/silver teflon PL259s	...	37.95
213-3ST 3' RG-213 coax/silver teflon PL259s	...	11.95
213-6ST 6' RG-213 coax/silver teflon PL259s	...	14.95
213-12ST 12' RG-213 coax/silver teflon PL259s	...	18.95
213-25ST 25' RG-213 coax/silver teflon PL259s	...	25.95
213-50ST 50' RG-213 coax/silver teflon PL259s	...	38.95
213-75ST 75' RG-213 coax/silver teflon PL259s	...	54.95
213-100ST 100' RG-213 coax/silver teflon PL259s	...	72.95

	Reg	Sale
<b>VECTRONICS</b> (VEC)		
VC-300M 300w mobile antenna tuner	.....	\$109.95 99 <sup>95</sup>
VC-300DLP 300w antenna tuner	.....	159.95 149 <sup>95</sup>
VC-300D 300w digital antenna tuner	.....	199.95 179 <sup>95</sup>
HFT-1500 1.5kw antenna tuner	.....	459.95 399 <sup>95</sup>
AT-100 .3-30 MHz active antenna/tuner	.....m	79.95
HF-600QSK 1kw HF amplifier w/QSK	.....Δm	1595.00 1299 <sup>95</sup>
HPF-1 High pass filter, 75 or 300 ohms	.....	19.95
HPF-2 Deluxe high pass filter, 75 or 300 ohms	.....	24.95
LP-30 1.5kw low pass filter	.....	49.95
LP-2500 2.5kw low pass filter	.....	79.95
CK-200 Deluxe keyer	.....m	79.95
DL-300M 300w dummy load	.....	34.95
DL-650M 1.5kw dummy load	.....	64.95
DL-2500 2.5kw dummy load	.....	199.95 179 <sup>95</sup>
PM-30HF 300/3kw HF wattmeter	.....	79.95
PM-30UV 30/300w VHF/UHF wattmeter	.....	89.95
AC-12 12vdc 300ma adapter	.....	12.95
PS-30F 25A power supply, 30A surge	.....	129.95
PS-50F 35A power supply, 50A surge	.....	199.95

	Reg	Sale
<b>VIBROPLEX</b> (VIB)		
090 Original Gold Bug	.....	\$329.95 299 <sup>95</sup>
100 Original Presentation Super deluxe bug	.....	289.95 269 <sup>95</sup>
105 Original Deluxe Bug	.....	199.95
110 Original Standard Bug	.....	159.95
113 VibroKeyer Gold Paddle	.....	299.95 269 <sup>95</sup>
115 VibroKeyer Deluxe Paddle	.....	179.95
120 VibroKeyer Standard Paddle	.....	139.95
123 Iambic Gold Paddle	.....	299.95 269 <sup>95</sup>
125 Iambic Presentation Paddle	.....	259.95 239 <sup>95</sup>
130 Iambic Deluxe Paddle	.....	179.95
135 Iambic Standard Paddle	.....	139.95
140 EK-1 Iambic keyer w/paddle	.....Dwfv	144.95 129 <sup>95</sup>
145 Triangular Brass Racer Iambic paddle	.....	99.95
150 Square Brass Racer Iambic paddle	.....	139.95
153 Gold straight key	.....	299.95 269 <sup>95</sup>
155 Standard straight key	.....	139.95
160 Deluxe straight key	.....	179.95
162 Gold Hand key/Iambic Paddle double	.....	399.95 359 <sup>95</sup>
163 Gold Hand key/VibroKeyer Paddle double	.....	399.95 359 <sup>95</sup>
165 Deluxe Hand key/Iambic Paddle double	.....	349.90 319 <sup>95</sup>
170 Dix Hand key/VibroKeyer Paddle double	.....	349.90 319 <sup>95</sup>
175 Standard Hand key/Iambic Paddle double	.....	299.95 269 <sup>95</sup>
180 Std Hand key/VibroKeyer Paddle double	.....	299.95 269 <sup>95</sup>

	Reg	Sale
<b>WA1FLL</b> (WA1)		
Ladder-Loc 450 ohm ladderline center attach		\$ 12.95
<b>W2AU</b> (Unadilla) (W2A)		
W2AU 1:1 160-10m balun, lightning arrestor		\$ 24.95
W2AU Beam Balun, 1:1		24.95
W2AU 4:1 160-10m balun, lightning arrestor		24.95
W2DU-HF 1:1 1.8-30 MHz choke balun		26.95
W2DU Beam Balun 40-10m 1:1 choke balun		26.95



## W2AU - continued

	Reg	Sale
W2DU-VHF 1:1 30-250 MHz choke balun .....	26.95	
HA AN-sulator center insulator .....	9.95	
HE END-sulator end insulators .....pair	4.95	
KW-80CW Reyco 80m CW ant traps .....pair	48.95	
KW-80F Reyco 75m phone ant traps .....pair	48.95	
KW-40 Reyco 40m antenna traps .....pair	42.95	
KW-30 Reyco 30m antenna traps .....pair	42.95	
KW-20 Reyco 20m antenna traps .....pair	41.95	
KW-17 Reyco 17m antenna traps .....pair	41.95	
KW-15 Reyco 15m antenna traps .....pair	41.95	
KW-12 Reyco 12m antenna traps .....pair	41.95	
KW-10 Reyco 10m antenna traps .....pair	41.95	
W2AU/W2VS 5-band ant kit (use tuner) .....	85.95	

## W5YI (W5Y)

GWAM Gordon West Advanced study manual	\$ 11.95	
GWAW Gordon West Adv written theory tapes	19.95	
GWEG Gordon West 6 ea 10-28 wpm code tapes	29.95	
GWEM Gordon West Extra study manual .....	11.95	
GWET Gordon West Extra code tapes .....	9.95	
GWEW Gordon West Extra written theory tapes	19.95	
GW66 Gordon West 6 ea 5-16 wpm code tapes	29.95	
GWGM Gordon West General study manual ...	9.95	
GWGT Gordon West General code tapes .....	9.95	
GWGW Gordon West General theory tapes .....	9.95	
GWNG Gordon West 6 ea 0-7 wpm code tapes .	29.95	
GWNT Gordon West Novice Code Teacher .....	9.95	
GWNW Gordon West Novice theory tapes .....	9.95	
GW6T Gordon West No-Code Tech theory tapes	29.95	
GWTM Gordon West No-Code Tech manual ....	12.95	
GW7W Gordon West Tech theory tapes .....	9.95	
HOS Ham operator software package .....	39.95	
NCS No-code ham radio software package ...	29.95	
NCVP Ham No-Code video seminar w/manual	31.95	

## WABER AC OUTLET STRIPS (WAB)

4S 4 outlet/breaker/switch .....Δm	\$ 16.60	4 <sup>95</sup>
5 5 outlet w/breaker .....Δm	16.60	4 <sup>95</sup>

## WAHL (WAH)

7740 Quick charge cordless soldering iron kit	\$ 45.95	
7980 Butane soldering iron and torch .....Df	29.95	

## WALNUT CREEK (WAL)

Antennas Antennas CD-ROM .....	\$ 29.95	
CICA 650 MB current Windows share .....Δm	29.95	9 <sup>95</sup>
Garbo 250 MB DOS + 150 MB Mac .....Dmv	29.95	6 <sup>95</sup>
Giga Games 3,000 DOS/Windows games .....Δmf	39.95	12 <sup>95</sup>
Ham QRZ US & Canada calls plus programs.	29.95	
Hobbes 1,000's of OS/2 applications .....Δmf	29.95	9 <sup>95</sup>
Simtel 650 MB current DOS programs .....Δf	29.95	9 <sup>95</sup>

## WELLER (WEL)

7200PK 75w soldering gun kit .....	\$ 26.95	
EC-1002-1 40w temp controlled solder stn ..	232.14	199 <sup>95</sup>
WP-25 25w professional soldering iron .....	31.95	
W-60P 60w temp controlled soldering iron ...	59.95	
WTCPT 60w temp controlled soldering stn ....	131.31	109 <sup>95</sup>
WSTA3 Pyropen portable LP soldering iron ....	102.96	89 <sup>95</sup>
WST2 Pyropen Jr. portable butane iron .....	82.67	69 <sup>95</sup>

## YAESU (YAE)

FT-1000MP/DC 9-band Xcvr/EDSP/tuner .....†	3399.00	2749 <sup>95</sup>
FP-1025A 20A switching ps, 25A surge .....	199.00	179 <sup>95</sup>
FP-1030A 25A ps, 30A surge w/meters .....	269.00	249 <sup>95</sup>
FT-1000MP 9-band Xcvr/EDSP/tuner/ps .....†	3699.00	2899 <sup>95</sup>
DVS-2 Digital voice recording module .....	238.00	219 <sup>95</sup>
FH-1 Remote control keypad .....	88.95	
MD-100A8X Desk mic w/tone control .....	138.00	129 <sup>95</sup>
MH-31B8 Extra hand microphone .....	39.95	
SP-8 External speaker w/filters .....	173.00	159 <sup>95</sup>
LL-7 Phone patch unit for SP-8 .....	153.00	139 <sup>95</sup>
TCXO-4 TCXO unit .....	99.95	
TCXO-6 Deluxe TCXO unit, 0.5 ppm .....	190.00	174 <sup>95</sup>
YF-110CN 250 Hz 3rd IF main Rcvr CW filt ..	157.00	144 <sup>95</sup>
YF-110SN 2 KHz 3rd IF main Rcvr SSB filt ..	157.00	144 <sup>95</sup>

## YAESU - continued

YF-114CN 250 Hz 2nd IF main Rcvr CW filt ..	157.00	144 <sup>95</sup>
YF-114SN 2 KHz 2nd IF main Rcvr SSB filt ..	157.00	144 <sup>95</sup>
YF-115C 500 Hz CW Collins mech filter ....	173.00	159 <sup>95</sup>
YH-77ST Open-air type stereo headphones ..	51.95	
FT-1000 Xcvr w/ps/tuner/keyer/mic/XF-AB ....	4399.00	3499 <sup>95</sup>
\$200 instant coupon - FT-1000 thru 11/30/97		
BPF-1 Dual bandpass filter; crossband rcv ..	196.00	179 <sup>95</sup>
TCXO-1 Temp compensated xtal osc Δmwfv ..	190.00	129 <sup>95</sup>
XF-C 2.4KHz SSB xtal filt (455KHz) ...Δmfv	157.00	129 <sup>95</sup>
XF-D 2 KHz SSB xtal filter (455 KHz) .....	157.00	139 <sup>95</sup>
YF-110C/XF-E 500 Hz CW xtal filter (455 KHz)	157.00	144 <sup>95</sup>
FT-1000D Dlx Xcvr w/BPF/TCXO/XF-ABCDE ...	5459.00	4399 <sup>95</sup>
\$200 instant coupon - FT-1000D thru 11/30/97		
DVS-2 Digital voice recording module .....	238.00	219 <sup>95</sup>
FIF-232C Interface for RS-232 .....	95.95	
MD-1C8 Desk microphone .....Dmwfv	122.95	
MD-100A8X* Desk mic w/tone control .....	138.00	129 <sup>95</sup>
*Cable needed for FT-1000D contact service for info		
SP-5 External spkr w/audio filter .....	157.00	144 <sup>95</sup>
LL-5 Phone patch unit for SP-5 .....	143.00	129 <sup>95</sup>
XF-455MC 600Hz CW filter (455KHz); subrcvr	157.00	144 <sup>95</sup>
YF-110CN/XF-F 250 Hz CW xtal filter (455 KHz)	157.00	144 <sup>95</sup>
YH-77ST Open-air type stereo headphones ..	51.95	
FT-920 9-band Xcvr/AF-DSP/tuner/6m/kyrr +	2299.00	1799 <sup>95</sup>
\$100 instant coupon - FT-920 thru 11/30/97		
FP-1025A 20A switching ps, 25A surge .....	199.00	179 <sup>95</sup>
FP-1030A 25A ps, 30A surge w/meters .....	269.00	249 <sup>95</sup>
FM-1 FM unit .....	62.95	
MD-100A8X Desk mic w/tone control .....	138.00	129 <sup>95</sup>
SP-8 External speaker w/filters .....	173.00	159 <sup>95</sup>
LL-7 Phone patch unit for SP-8 .....	153.00	139 <sup>95</sup>
TCXO-7 TCXO unit .....	99.95	
YF-116A 6 KHz AM filter .....	127.00	119 <sup>95</sup>
YF-116C 500 Hz CW filter .....	127.00	119 <sup>95</sup>
YH-77ST Open-air type stereo headphones ..	51.95	
SP-767P Speaker/patch for FT-767GX .....Δm	143.00	139 <sup>95</sup>
TCXO-2 Temp comp xtal osc; FT990 ...Δmwfv	157.00	69 <sup>95</sup>
XF-10.9M-202-01 2nd IF 2KHz SSB filt; FT990	127.00	119 <sup>95</sup>
XF-109C 500 Hz CW filter for FT-990DC .Δwf	127.00	119 <sup>95</sup>
FT-900/AT Xcvr/rem front/mic/tuner .....Dv	1719.00	1369 <sup>95</sup>
\$100 instant coupon - FT-900/AT until gone!		
YSK-900 remote kit FREE with FT-900/AT! until gone!		
XF-115S-01/YF115S01 2.75 Collins .....Dm	189.00	99 <sup>95</sup>
ATU-2 Internal antenna tuner; FT-900 .....Δm	301.00	269 <sup>95</sup>
FT-900/CAT Xcv/rem/mic/tune/Collins SSB filt .	1819.00	1369 <sup>95</sup>
YSK-900 remote kit FREE with FT-900/CAT! Limited Time!		
FP-1025A 20A switching ps, 25A surge .....	199.00	179 <sup>95</sup>
FP-1030A 25A ps, 30A surge w/meters .....	269.00	249 <sup>95</sup>
CT-26 Mic adapter cable; modular to 8-pin ..	22.95	
DVS-2 Digital voice recording module .....	238.00	219 <sup>95</sup>
FC-800 External long wire auto tuner .....	525.00	449 <sup>95</sup>
FIF-232C Interface for RS-232 .....	95.95	
MD-1C8 Desk microphone .....Dmwfv	122.95	
MD-100A8X Desk mic w/tone control .....	138.00	129 <sup>95</sup>
CT-20 Mic cable for use with MD-1C8 ....	22.95	
MH-31A8J Extra hand microphone .....	39.95	
MMB-20 Mobile mount .....	34.95	
SP-6 External speaker w/filter .....	157.00	144 <sup>95</sup>
LL-5 Phone patch unit for SP-6 .....	143.00	129 <sup>95</sup>
SP-7 Mobile speaker .....	40.95	
TCXO-3 TCXO unit .....	79.95	
XF-110C 455 KHz 500 Hz CW filter .....	157.00	144 <sup>95</sup>
XF-110CN 455 KHz 250 Hz CW filter .....	157.00	144 <sup>95</sup>
XF-110S 455 KHz 2.6 KHz SSB filter .....	157.00	144 <sup>95</sup>
YF-101 2nd IF 2.6 KHz SSB filter .....	179.00	139 <sup>95</sup>
YA-007FG Mobile fg 3-30 MHz whip ....Dmf	157.00	99 <sup>95</sup>
YH-77ST Open-air type stereo headphones ..	51.95	
YSK-900 20' remote mtg kit w/tkn mtg bkt ..	68.95	
MMB-62 Remote control panel bracket ..	39.95	
FRB-757 External relay box .....	31.95	
FT-600 Commercial grade HF Xcvr .....	1105.00	899 <sup>95</sup>
FC-800 External long wire auto tuner .....	525.00	449 <sup>95</sup>
MMB-20 Mobile mount .....	34.95	
FT-840 Xcvr/SW Rcvr .....	1099.00	899 <sup>95</sup>

## YAESU - continued

Yaesu & AES a Great Combination!		
FP-1025A 20A switching ps, 25A surge .....	199.00	179 <sup>95</sup>
FP-1030A 25A ps, 30A surge w/meters .....	269.00	249 <sup>95</sup>
FC-10 External coax fed auto tuner .....	429.00	379 <sup>95</sup>
FC-800 External long wire auto tuner .....	525.00	449 <sup>95</sup>
FIF-232C Interface for RS-232 .....	95.95	
FM-747 FM unit .....	62.95	
MD-1C8 Desk microphone .....Dmwfv	122.95	
MD-100A8X* Desk mic w/tone control .....	138.00	129 <sup>95</sup>
*Cable needed for FT-840 contact service for info		
MMB-20 Mobile mount .....	34.95	
SP-6 External speaker w/filter .....	157.00	144 <sup>95</sup>
SP-7 Mobile speaker .....	40.95	
TCXO-4 TCXO unit .....	99.95	
YF-112A 6 KHz AM filter .....	127.00	119 <sup>95</sup>
YF-112C 500 Hz CW filter .....	127.00	119 <sup>95</sup>
YH-77ST Open-air type stereo headphones ..	51.95	
E-767 Cable - FL-7000/FT-767/990/1000/MP ..	16.95	
FAS-1-4R Remote antenna selector .....	143.00	129 <sup>95</sup>
FP-700 Power supply .....Dmwfv	286.00	209 <sup>95</sup>
FC-757AT Auto ant tuner w/memory .....	585.00	499 <sup>95</sup>
FL-7000 Solid state amp w/auto tuner ....Dm	2617.00	2199 <sup>95</sup>
FL-7000 very limited quantity!		
CT-11 Cable - FL-7000 to FT-890/900 .....	19.95	
E-767 Cable - FL-7000/FT-767/990/1000/MP ..	16.95	
FAS-1-4R Remote antenna selector .....	143.00	129 <sup>95</sup>
Quadra System VL1000/VP1000 amp/tuner .	5990.00	4999 <sup>95</sup>
MR-1000 Quadra system mounting rack ...	299.00	289 <sup>95</sup>
FRG-100B .1-30 MHz shortwave receiver .....	739.00	619 <sup>95</sup>
FM Unit-100 FM unit.....	47.95	
TCXO-4 TCXO unit .....	99.95	
YF-110C/XF-E 500 Hz CW xtal filter .....	157.00	144 <sup>95</sup>
YF-110CN/XF-F 250 Hz CW xtal filter .....	157.00	144 <sup>95</sup>
XF-455M6 600 Hz CW filter; FT-650 .....Dmv	169.00	69 <sup>95</sup>
YA-30 1.8-30 MHz broadband dipole ant .....	269.00	239 <sup>95</sup>
YH-77 Lightweight headphones .....Dv	30.95	
YH-77ST Open-air type stereo headphones ...	51.95	
YS-60 1.8-60 MHz 2kw PEP wattmeter .....	139.00	129 <sup>95</sup>
YS-500 140-520 MHz 200w PEP wattmeter ..	114.00	109 <sup>95</sup>
FT-736R 25w 2m/430 full dplx Xcvr/ps/mic ..	2449.00	1969 <sup>95</sup>
AD-3 100w 2m/440 duplexer .....	52.95	
E-736 DC cable .....	16.95	
FEX-736-50 6m module .....	317.00	279 <sup>95</sup>
FEX-736-220 220 MHz module .....	349.00	309 <sup>95</sup>
FEX-736-1.2 1.2 GHz module .....	619.00	539 <sup>95</sup>
FIF-232C Interface for RS-232 .....	95.95	
FTS-8 Encoder/decoder .....	62.95	
FVS-1A Voice synthesizer .....	43.95	
Keyer-B Electronic keyer unit .....	26.95	
MD-1C8 Desk microphone .....Dmwfv	122.95	
MH-1B8 Extra hand microphone .....	30.95	
SP-767 Speaker w/audio filters .....	110.00	99 <sup>95</sup>
TV-736 1.2 GHz ATV converter .....	205.00	189 <sup>95</sup>
FT-690R Mk II 10w 6m FM/SSB Xcvr/TTP .....†	889.00	569 <sup>95</sup>
FT-290R Mk II 25w 2m FM/SSB Xcvr/TTP ....	749.00	629 <sup>95</sup>
FT-790R Mk II 25w 430-450 FM/SSB/TTP ....	869.00	719 <sup>95</sup>
Fun Radios for the Outdoors!		
CSC-19 Soft case .....	16.95	
FBA-8 Holder for 9 C-cell nicads .....	39.95	
NC-26B Wall charger for FBA-8 .....	9.95	
FTS-7A Encoder/decoder; current units .....	44.95	
FT-5200 50/35w 2m/440 FM/TTP mic .....D	Sold	Out
FT-6200 35/10w 440/1.2GHz FM Xcvr/TTP ...	899.00	749 <sup>95</sup>
DVS-3 Digital voice memory unit .....Δmwfv	157.00	119 <sup>95</sup>
FRC-4 DTMF pager unit; 5200/6200 Dmwfv ..	47.00	19 <sup>95</sup>
FTS-22 CTCSS decode unit .....	68.95	
MH-27B8 Extra TTP mic w/8-pin plug .....	65.95	
MW-2* Wireless rem control mic .....Dmwfv	162.00	99 <sup>95</sup>
* Requires jumper modification		
MMB-53 Mobile mtg bkt for MW-2 Δmwv ..	8.95	
SP-7 External speaker .....	40.95	
YSK-1L Sep kit w/18' cable; FT-5200/6200 ..	58.95	
FT-8100R 50/35w 2m/440 FM Xcvr/TTP .....	699.00	579 <sup>95</sup>
\$35 instant coupon - FT-8100R thru 11/30/97		



# PRICE LIST

## YAESU - continued

AES - your Holiday Gift Headquarters	
ADMS-2D Windows programming software	39.95
CT-39 Packet cable	9.95
FTS-22 CTCSS decode unit	68.95
MEK-2 Mic extension kit	42.95
MMB-60 Quick release mobile bracket	31.95
YSK-8100 Remote separation kit	69.95
FT-8500 50/35w 2m/440 FM/FS10 dlx TT mic	859.00
FT-8500/MH-39 50/35w 2m/440 FM/std TT	809.00
ADMS-2D Windows programming software	39.95
CT-39 Packet cable	9.95
FS-10 Extra deluxe mic for FT-8500	138.95
FTS-22 CTCSS decode unit	68.95
MH-27B8 TTP mic w/8-pin plug	65.95
MEK-2 Mic adapter kit for MH-27B8	42.95
MH-39A6J Extra regular mic for FT-8500	104.95
MMB-60 Quick release mobile bracket	31.95
SP-7 External speaker	40.95
YSK-8500 Remote separation kit	69.95
MMB-62 Remote control panel bracket	39.95
MH-15D8 Autodial TTP microphone	75.95
FT-7400H 35w 440 FM Xcvr w/TTP mic	629.00

### High Quality & Great Value!

2400 Mic Cable 2' packet cable	9.95
FRC-6 DTMF pager unit	47.00
FTS-17A CTCSS decode unit	47.95
MH-27A8J Extra TTP mic w/modular plug	60.95
SP-7 External speaker	40.95
FT-3000M 70w 2m FM Xcvr/TTP/ext rcv	542.00
ADMS-2D Windows programming software	39.95
CT-39 Packet cable	9.95
DVS-4 Digital voice recording module	47.95
FTS-17A CTCSS decode unit	47.95
FT-2500M 50w 2m FM Xcvr w/TTP mic	409.00

### \$30 instant coupon - FT-2500M thru 11/30/97

2400 Mic Cable 2' packet cable	9.95
FRC-6 DTMF pager unit	47.00
FTS-17A CTCSS decode unit	47.95
FT-7200 35w 440 FM Xcvr/TTP mic	639.00
DVS-3 Digital voice memory unit	157.00
FTS-27 CTCSS decode unit	47.95
MW-2 Wireless remote control mic	162.00
MMB-53 Mobile mtg bkt for MW-2	8.95
SP-7 External speaker	40.95
FP-712/Vertex 10A switching ps, 12A surge	135.00
FP-1025A 20A switching ps, 25A surge	199.00
FP-1030A 25A ps, 30A surge w/meters	269.00
LF-1 Mobile 13A DC noise filter	26.95
MLS-100 Mobile speaker	45.95
SP-3 Small mobile speaker	23.95
SP-4 Mobile speaker	31.95

VXR-5000VADC/Vertex 25w 2m FM repeater	1635.00
VXR-5000UCDC/Vertex 25w 440 FM repeater	1635.00
Repeater require service dept. set-up; \$72 minimum	
COM ID-8 Auto morse code ID'er	69.95
MR-KIT1 19" rack mtg kit; VXR repeater	218.00
VXD-40UB/Vertex 440 duplexer (untuned)	222.00
Tuning charge; VXD-40UB (specify freqs)	50.95
VX VPL-1 PC programming cable	65.95

### Accessories for FT-208R/708R

FNB-2A Nicad battery pack	\$ 45.95
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### Accessories for 09-series/03-series

FNB-4A 500ma 12v battery	\$ 62.95
FTS-6 Encoder/decoder; 09-series	35.00
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# AMATEUR ELECTRONIC SUPPLY® Used & Demo Equipment

**USED EQUIPMENT** ★ Only the Cleanest Gear accepted in trade, absolutely the finest available, anywhere! ★ Fully Service Tested for original specifications ★ 10 day Trial ★ 30 day Guarantee ★ Full Credit within 90 Days on Higher Priced New Equipment

**DEMO EQUIPMENT** This is New Equipment that has been Demonstrated, on Display or Returned & Restocked. The cartons are no longer factor sealed, but each has been checked by our Service Department and carries a 100% New Warranty. *Used equipment policies do not apply.*

**LOCATION** The letters after each price indicate where the item was located as of October 14, 1997: (m) Milwaukee: (1-800-558-0411) (w) Wickliffe: (1-800-321-3594); (f) Orlando: (1-800-327-1917); (v) Las Vegas: (1-800-634-6227).

## USED EQUIPMENT

<b>ADI</b>	
AT200 2M 2W HT.....	129.95 f
RPB120A 12V 600ma. battery.....	39.95 f
RPB072A 7.2v 700 ma. battery.....	39.95 f
<b>ALINCO</b>	
DJ11T 2M HT.....	83.95 f
DJ180T 2M 2W HT.....	139.95 v
DRM06T 6M 10W XCVR.....	269.95 w
DR140T 2M MOBILE.....	229.95 w
DR140TQ 2M MOBILE.....	239.95 m
DR150T 2M 50W W/UHF RX.....	239.95 f
DR430T 440 FM MOBILE.....	259.95 m
DR590T 2M/440 XCVR.....	399.95 f
DX70TH HF/6M HP XCVR.....	779.95 m
EBP22N (28N) 12V 600MA.....	49.95 wf
EBP36N 5W BATT.....	54.95 v
EDX2 HF AUTO TUNER.....	249.95 v
<b>AMERITRON</b>	
ALS600 HF/S-S AMP & P/S.....	879.95 w
AL811H HF AMP.....	569.95 w
QSK5 T/R SWITCH.....	239.95 v
<b>AOR</b>	
AR3030 COMM RECEIVER.....	789.95 v
<b>ASTRON</b>	
RS10A 7.5A ps.....	59.95 w
RS20A 16A ps.....	79.95 w
RS35M 25A ps.....	129.95 w
RS4L 4A PS.....	39.95 f
VS35M 25A VARIABLE.....	149.95 w
12-15 POWER INVERTER.....	38.95 m
<b>ASTATIC</b>	
TUG9 DESK STAND.....	39.95 f
TUG9 10DAL DESK MIC.....	69.95 f
<b>AZDEN</b>	
AZ61 6METER HT.....	299.95 w
BP11A 5 WATT BATT.....	47.95 w
PCS7000H 50W 2M XCVR.....	199.95 wf
PCS7800H 50W 10M FM.....	339.95 m
<b>B&amp;W</b>	
AS20 20/15/10 MTR DIPOLE.....	49.95 f
CR115 COAXIAL RELAY.....	35.95 f
FL10/1500 1KW LOW-PASS.....	45.95 w
<b>BIRD</b>	
5A 25-60MHZ Element.....	39.95 f
<b>COURIER</b>	
M510 BUSINESS BAND.....	169.95 m
M54 VHF HT (151.625 MHz).....	149.95 m
<b>CONNECT SYSTEMS</b>	
CS800 DUPLEX AUTO PATCH.....	299.95 f
<b>DAIWA</b>	
CN410M SWR/POWER METER.....	69.95 m
CN465M SWR/POWER METER.....	69.95 fv
<b>DAVIES</b>	
7852 RAIN COLLECTOR.....	69.95 f
<b>DIAMOND</b>	
K601NMO TK MT.....	49.95 mf
<b>DRAKE</b>	
R8A SWL RCVR.....	819.95 m
SW2 SWL RCVR.....	399.95 m
<b>GENESYS</b>	
EARTALK MIC II.....	59.95 m
<b>GRUNDIG</b>	
YB400 SWL RCVR.....	169.95 f
<b>HEIL</b>	
PRO5 HEADSET.....	119.95 m
<b>HYGAIN</b>	
2400155 RADIO HEADSET.....	59.95 f
<b>ICOM</b>	
AG35 Preamp.....	69.95 m
AT150 100W AUTO TUNER.....	399.95 mw
AT160 AUTO TUNER.....	199.95 w
ICO AT500 Auto ant tuner.....	399.95 w
BC72 RAPID DESK CHARGER.....	79.95 m
BC80 Desk chgr.....	79.95 f
BP114 12V/400MA BATTERY.....	39.95 m

<b>KANTRONICS</b>	
HOSTMASTER MAC SFTWR.....	69.95 m
<b>KENWOOD</b>	
AT300 AUTO WIRE TUNER.....	449.95 f
BC11 CHARGER.....	69.95 f
BC15 RAPID CHARGER.....	39.95 f
BT9 AA HOLDER.....	19.95 w
HMC2 Headset.....	39.95 f
IF232C Level translator.....	69.95 w
KNB7A 800 MIL 12V.....	50.95 w
KSC15A FAST CHARGER.....	39.95 w
MC50 Desk mic.....	49.95 m
PB13 BATTERY.....	39.95 f
PB18 LIKE NEW REFURB.....	72.95 fv
PB18 7.2 1100MAH TH78/28/27.....	50.95 w
PB32 6V/600 BATT.....	29.95 w
PB34 9.6V 600 MH.....	69.95 mw
PG3F CORD.....	18.95 f
PG3H CIG CORD.....	29.95 w
PS430 Compact ps.....	149.95 w
RM76 CONTROLLER/AS-IS.....	39.95 f
R2000 SWL / BLEMISHED.....	489.95 m
R2000 SWL /VC10/YG455C+.....	639.95 w
R2000 SWL RCVR.....	499.95 wv
R2000 SWL RCVR/VC-10.....	559.95 mw
SMC32 Mini spkr mic.....	39.95 w
SP520 Spkr.....	29.95 m
SP930 Spkr.....	79.95 w
SP950 Spkr.....	99.95 w
SW2100 SWR/power meter.....	99.95 f
TH22AT 2.5W 2M HT/TSU8.....	219.95 m
TH28A 2M HT.....	199.95 mf
TH42AT/TSU8 UHF HANDI.....	319.95 w
TL922A 2KW HF amp/(2)3-500.....	1299.95 fv
TM2530A 25W 2m FM xcvr.....	269.95 f
TM255A 2M 40W SSB/FM.....	699.95 m
TM2550A/NO BRACKET.....	269.95 w
TM701A 2M/440.....	299.95 m
TR7800 25W 2m FM xcvr.....	159.95 m
TR7850 2m FM xcvr.....	169.95 v
TR7950 2M FM.....	179.95 m
TSU7 CTCSS DECODER UNIT.....	39.95 f
TS140S HF xcvr.....	679.95 w
TS440S HF XCVR.....	749.95 wv
TS440S/AT HF YK88C/VS1.....	909.95 w
TS440S/AT HF/YK88CN/88SN+.....	919.95 w
TS440S/AT HF XCVR.....	849.95 wfv
TS440S/AT HF XCVR/IC10.....	859.95 m
TS440S/AT HF XCVR/YK88C+.....	889.95 w
TS440S/AT HF XCVR/YK88C+.....	909.95 m
TS440S/AT HF XCVR/YK88S.....	879.95 w
TS440S/AT HF XCVR/YK88SN.....	879.95 f
TS440SAT/YK88S/C/IC10.....	899.95 w
TS450S HF XCVR.....	869.95 m
TS450S HF XCVR.....	869.95 w
TS450S HF XCVR/YG455C1.....	939.95 f
TS450S/AT HF XCVR.....	999.95 v
TS450S/YK88SN1.....	939.95 w
TS50S HF XCVR.....	639.95 v
TS520S HF XCVR.....	399.95 m
TS520S HF XCVR/ DC UNIT.....	419.95 m
TS520SE/CW HF XCVR.....	429.95 v
TS530S HF XCVR.....	489.95 wf
TS530SP HF XCVR.....	499.95 v
TS570D HF XCVR.....	999.95 wv
TS60S 6M XCVR.....	799.95 f
TS680S 160-6M xcvr.....	789.95 m
TS690S HF/6M XCVR.....	1019.95 w
TS711A 25W 2m SSB/FM xcvr+.....	729.95 m
TS811A 25W 430-450 multi+.....	869.95 m
TS830S HF /YG455C/YK88C.....	739.95 w
TS830S HF XCVR.....	649.95 wv
TS830S HF XCVR/YG-455C.....	689.95 v
TS850S/AT HF XCVR YG455C1.....	1279.95 v
TS850S/AT HF YK88SN1/88CN1+1339.95 f	
TS870S HF DSP XCVR.....	1839.95 v
TS870S/DRU3.....	1878.95 w

TS930S HF XCVR.....	799.95 v
TS930S/AT HF xcvr.....	899.95 wf
TS940S HF XCVR.....	1229.95 wf
TS940S HF XCVR/YG455C1.....	1299.95 v
TS940S/AT HF XCVR.....	1399.95 wv
TS940S/AT HF XCVR/IF10.....	1419.95 v
TS940S/AT HF XCVR/YG455C1.....	1449.95 v
TS940S/AT HF XCVR/YK88C1/AL1459.95 m	
TS940S/AT/YK88C1 HF XCVR.....	1399.95 m
TS950SDX/RM1.....	2547.95 w
TU8 TONE UNIT.....	32.95 w
TW4100A 45/35W 2m/440 FM.....	349.95 w
TW4100A 45/35W 2M/440 xcvr+359.95 f	
YK88CN 270 HZ CW FILTER.....	79.95 f
<b>MAXON</b>	
MX49HX.....	39.95 w
WX70 WEATHER RADIO.....	29.95 m
49H Handheld Communicators (2)39.95 w	
<b>MFJ</b>	
1272MX TNC MIC SWITCH.....	29.95 w
1621 40-10m port. ant/tuner.....	49.95 wv
206 ANTENNA CURRENT PROBE.....	39.95 f
247 SWR ANALYZER.....	119.95 f
346 600MHZ LCD Freq Counter.....	109.95 v
407B ELECTRONIC KEYS.....	39.95 m
422B Keyer combo.....	99.95 wf
722 SSB/CW/NOTCH FILTER.....	59.95 w
752C Dual Tunable SSB/CW Filter.....	69.95 w
815B 160-10m SWR/wattmeter.....	39.95 w
9015 15m QRP xcvr.....	119.95 w
9120B 20m CW pkg.....	259.95 w
931 Artificial ground.....	49.95 f
986 3KW tuner.....	209.95 w
989C Deluxe 3KW tuner.....	249.95 m
<b>MIRAGE</b>	
B23G 2/30W 2M AMP.....	109.95 f
<b>NCG</b>	
MH900PK EAR MIKE HEADSET.....	29.95 w
<b>OAK BAY</b>	
LP11P 1KW LOW PASS FILTER.....	49.95 m
LP11P 1KW LOWPASS FILT(N).....	49.95 f
<b>OPTOELECTRONICS</b>	
R10 RCVR.....	174.95 m
SCOUT (MODEL 25).....	359.95 f
<b>PALOMAR</b>	
PA360 AMPLIFIER.....	29.95 w
PF300 AUDIO FILTER.....	69.95 m
<b>PANASONIC</b>	
RFB45 SW ALL BAND RCVR.....	109.95 w
RFB60 SWL rcvr.....	149.95 f
<b>PERIPHEX</b>	
BP7S 13.2V 1200MA.....	49.95 w
EBP22S 12 VOLT 800 MAH.....	52.95 w
EBP24S 7.2V 1500 MA.....	49.95 w
FNB27 YAESU BATTERY.....	39.95 m
PB13S 7.2V 1300MH.....	39.95 w
<b>RANGER</b>	
RCI1000/A RED 151.625.....	109.95 w
RCI1000/C GREEN 154.600.....	109.95 w
RCI7000 5W 88CH MARINE HT.....	129.95 w
<b>SANGEAN</b>	
ATS808 SW rcvr.....	119.95 f
ATS909.....	223.95 w
<b>SGC</b>	
0401 SG2000 HF XCVR.....	999.95 mw
<b>SHAKESPEARE</b>	
176BGSU 10M ANT UPS OK.....	29.95 w
<b>SHURE</b>	
526T SERIES II.....	89.95 m
<b>SONY</b>	
ICFSW100S SWL RCVR.....	269.95 w
ICFSW77 SWL RCVR.....	359.95 mw
ICF2002 SWL RCVR.....	139.95 w
ICF2010 SWL RCVR.....	249.95 v
PRO80 SCAN RCVR.....	249.95 m

<b>STANDARD</b>	
CMP115 SPEAKER MIKE.....	39.95 w
CNB151GY 7.2/700MA BATT.....	39.95 m
CNB153 7.2V 1A NICAD.....	65.95 w
CNB171 7.2 700MAH BATT.....	59.95 w
CNB184 6V/600MAH BATT.....	30.95 m
C178A 2MTR/440 HT.....	319.95 w
C156A 2M HANDHELD.....	159.95 f
C168A 2M MINI FM HT/TP.....	249.95 mw
C468A 440 HT.....	249.95 m
C508A 2M/440 MINI HT/CSE.....	229.95 wf
C558A 2M/440 HT/CSE.....	409.95 w
C5718DA 2M/440 MOBILE.....	569.95 mw
<b>STARTEK</b>	
1350 COUNTER.....	119.95 f
<b>TRIPP LITE</b>	
PR20 20 AMP PWR SUPPLY.....	79.95 v
<b>UNIDEN</b>	
BC8500XLT SCANNER.....	335.95 v
BC860XLT SCANNER.....	149.95 w
<b>VECTRONICS</b>	
PM30UV 300/3K HF WATTMETER.....	69.95 f
<b>YAESU</b>	
CA14 CHARGING SLEEVES/NC50.....	21.95 w
EDC12 DC ADAPTER/CHARGER.....	29.95 m
FBA3 Battery.....	19.95 w
FC757AT ant tuner/memory.....	299.95 mw
FC757AT ANT TUNER/E767.....	309.95 f
FL7000 EARLY/UNIT/120V.....	1499.95 f
FNB31 4.8V 600 MA.....	39.95 mw
FNB33 1200MA 4.7V 1.5W.....	49.95 mw
FNB38 600MA 9.6V 5W BATTERY.....	58.95 w
FP107E p/s.....	129.95 w
FP757GX (OLD STYLE).....	119.95 w
FP757GX (Wired for FT-890 & up).....	119.95 m
FP757HD HD POWER SUPPLY.....	219.95 f
FP800 20A HD PS.....	219.95 m
FR6100B SWL RCVR.....	439.95 m
FR68800 SWL rcvr.....	529.95 wv
FT10/40BA16S 2M/440 HT.....	239.95 w
FT11R/HP 2M 5WATT HT.....	239.95 mf
FT209RH 5W 2m FM HT/FBA5+.....	219.95 w
FT290RMKII/FBA8.....	429.95 w
FT3000M 70W 2m FM XCVR+.....	399.95 f
FT51R 2M/440 HT.....	359.95 w
FT51R/HP 2M/440 HT.....	379.95 w
FT690R MkII 10W 6m FM/SSB.....	469.95 mw
FT726R 2m/440 XCVR/FTS-8.....	749.95 w
FT747GX HF XCVR.....	549.95 f
FT747GX HF XCVR/FM-UNIT.....	569.95 w
FT757GX MKII HF XCVR.....	719.95 w
FT76 FM HANDI UHF.....	179.95 w
FT767GX HF XCVR.....	1269.95 mw
FT767GX HF XCVR/2M.....	1399.95 m
FT767GX HF XCVR/2M/6M/440.....	1719.95 w
FT767GX/2M/FTS8.....	1419.95 v
FT815 UHF HANDY.....	239.95 w
FT840 HF XCVR.....	719.95 wf
FT8500 2M/440 /FS10.....	499.95 w
FT890 HF XCVR.....	969.95 w
FT890/AT HF xcvr w/tuner.....	999.95 mw
FT890/AT HF XCVR/ FRB757.....	1019.95 m
FT890/AT HF/YF101.....	1099.95 m
FT900/AT HF XCVR.....	999.95 fv
FT920 HF/6M XCVR.....	1599.95 f
FT990 AC HF XCVR.....	1359.95 v
MD1B8 Desk mic.....	89.95 w
MD100A8X DESK MIC.....	99.95 fv
MH29A2B SPKR MIC.....	89.95 w
MH30C2B SPEAKER MIKE.....	32.95 f
NC50 RAPID CHGR/CA10.....	69.95 v
PA10A MOBILE ADAPTER/CHGR.....	49.95 mf
SP6 External spkr.....	99.95 w
SP6 SPKR/LL5 PHONE PATCH.....	199.95 v
SP8 SPEAKER.....	99.95 f
Y0101 Scope.....	169.95 w
440/767 440-450 module.....	179.95 w



# DEMO EQUIPMENT

<b>ADI</b>	
AR146 2M XCVR	219.95 f
AT200 2 MT HT	134.95 mfv
AT201 2M HT	149.95 mw
AT600 2M/440 2W HT	269.95 f
RBP120 5W BATT	39.95 m
SLC200L 5W CASE	18.95 v
<b>AEA</b>	
ACARS SOFTWARE	79.95 m
DSP232 (NO SOFT)	299.95 m
DSP232 TNC	359.95 w
H CABLE	22.95 v
MACRATTW/FAX	29.95 m
PCB88 TNC	69.95 m
PK96 18K TNC	149.95 m
<b>AIM</b>	
38384 4A P/S	24.95 m
<b>ALINCO</b>	
DR140T	229.95 w
DJ65TH 2M/440 5W	319.95 f
DJ541T 440 FM HT	107.95 m
DJ480 440HT	199.95 m
DR140TQ 2M/EJ20U	249.95 m
DR610T 2M/440 MOB	539.95 f
EBP37N 4.8V 700MA	29.95 m
EME4 EAR/MIC	14.95 v
EMS8Z SPKR/MIC	34.95 m
ESC18 CASE DJ180T	12.95 m
WB110 BRKT	17.95 v
<b>ALPHA DELTA</b>	
ARC CONSOLE	199.95 mw
<b>AMECO</b>	
HP300T HI-PASS FLTR	10.95 v
DCM2K OSC KIT	17.95 m
PT3 2-54MHZ PREAMP	107.95 v
PT-12T DC P/S FOR PT-3	8.95 v
TPA ACTIVE ANT	39.95 m
<b>AMERITRON</b>	
ALS600 700W PEP	959.95 wfv
AL1500 AMP/8877	2069 <sup>95</sup> mv
AL800H 1.5K PEP	1799 <sup>95</sup> v
AL811H 800W PEP	649.95 m
ARCS4 COAX SWITCH	119.95 m
<b>ARC</b>	
AR3000 SSB/NO CELL	949.95 v
SC2700 CASE	12.95 m
<b>ARRL</b>	
215 GGTE MORSE SOFT	18.95 v
<b>ASTATIC</b>	
M575M6 HAND MIC	43.95 f
NIGHTEAGLE MIC	89.95 f
TUG9 STAND	39.95 fv
TUG9-D104 W/X TAL	71.95 w
LODAL MIC HEAD	44.95 v
<b>ASTRON</b>	
RS12A 9A PSA	71.95 f
RS4L 3A PS	34.95 m
RS70M 57A PS/MTRS	259.95 m
V35M VAR P/S	169.95 m
12-115 200W INV	54.95 m
<b>AZDEN</b>	
AR06M 6M HT ANT	31.95 v
AZ11 10M HT	269.95 m
AZ61 5W 6M FM HT	239.95 w
AZ03 MIC/HEADPH	44.95 mv
PCS7800H 10M FM	299.95 f
PTT01 PTT SWITCH	34.95 m
PTT02 VOX PTT SW	39.95 m
<b>B&amp;K</b>	
2704A MULTITESTER	44.95 m
2860A DMM	59.95 m
2911 METER	29.95 m
390 DMM	99.95 m
3WD 1.8-30 ANT	159.95 w
<b>BENCHER</b>	
3Y4 PADDLE	129.95 m
<b>BIRD</b>	
25L 1.7-2.2GHZ C/O	129.95 m
<b>BUCMASTER</b>	
HAMCALL CD-ROM	29.95 v
<b>CEC</b>	
SS168 PATCH	199.95 m
110 PERSONAL PATCH	99.95 m
1700VP PHONE PATCH	139.95 wfv

<b>CHEROKEE</b>	
AH50 6M HT	179.95 mv
<b>COBRA</b>	
FRS200 FRS HT	114.95 m
HH36ST TALKIE	59.95 m
RD6000 RADAR DET	29.95 m
SR11 H/H SCAN	59.95 f
<b>COMET</b>	
CF360A DPLXR/LEADS	62.95 v
CF416C DUPLXR	49.95 m
CH1350 10M/6M ANT	69.95 m
CM690 HF/6M METER	69.95 m
HA4S 40-10M MOB/ANT	99.95 m
HMP4F PETITE MIC	19.95 m
L14HS 20M COIL/HA4S	24.95 m
MSSLXNN MAG MT	39.95 w
SB825NMO 2M/440 ANT	44.95 m
SB25NMO 2M NMO ANT	34.95 v
<b>COMSPEC</b>	
ID8 AUTO CW ID'ER	49.95 m
<b>CONNECT SYSTEMS</b>	
CS800 PATCH	289.95 m
<b>COURIER</b>	
M54 5W W/151.625	179.95 mf
U22/A UHF HT	119.95 m
U22/B UHF HT	119.95 m
<b>CUSHCRAFT</b>	
26B2 2M ANT	269.95 w
APR18A RADIAL KIT	58.95 v
A148SK STACK/KIT	39.95 v
A743 ADD ON A3/A3S	116.95 v
LAC4NH ARRESTOR	39.95 v
PD2 POWER DIV	39.95 v
PS4A POLARITY SWITCH	69.95 m
R7000 40-10M VERT	339.95 v
<b>DAIWA</b>	
CN410M WATT METER	80.95 f
DP810 DIG RF METER	199.95 f
DP820 DIGITAL RF MTR	204.95 w
NS660PA HF-2M 3K MTR	179.95 f
<b>DIAMOND</b>	
DPGH62 6M 6DB 21' ANT	129.95 v
K400CNMO ANT MT	59.95 m
K550KM LUG MT/SO239	49.95 m
K600M UHF/TRUNK MT	62.95 v
K601M HIDE-TRUNK MT	62.95 v
SRH815 2M/440/1.2 SMA	39.95 v
SK100 1.6-60MHZ MTR	134.95 f
SK200 2-200MHZ 200W MTR	98.95 f
<b>DRAKE</b>	
MR306 AM/FM RCVR	49.95 m
SW1 SWL RCVR	224.95 mf
SW8 SWL RCVR	719.95 f
1591 R8PC SOFTWARE	8.95 m
7850 TECH MAN R8	29.95 m
<b>FORBES</b>	
VT14 2M VENTENNA	39.95 m
VT44 UHF ANT	39.95 m
<b>GAMBER</b>	
SS100 MT	59.95 m
<b>GARMIN</b>	
GPS12XL GPS	269.95 m
<b>GENESYS</b>	
CT221KE EARTALK	49.95 m
T05K THROAT/MIC	39.95 m
<b>GROTHE</b>	
VS2 SIREN	69.95 m
<b>GROVE</b>	
NO-ANT IN CAR ANT	12.95 m
<b>GRUNDIG</b>	
TRAVELLER II SWL	62.95 v
YACHT BOY 230 SWL	71.95 m
YACHT BOY 400 SWL	169.95 f
<b>HEIL</b>	
AD11 ICO PROSET ADAPT	13.95 m
PRO54 BOOM MIC/SGL SET	89.95 m
<b>HYGAIN</b>	
HDR300/A HD ROTOR	899.95 v
2400-155 BOOM MIC	79.95 v
303D T2X ROTOR	749.95 f
304 HAM IV ROTOR	399.95 v
<b>ICOM</b>	
IC706MKII HF/6/2M XCVR	1169.95 w
AD44 ADAPTOR	13.95 m
AD51 CHARGE ADAPTOR	9.95 m
AH2B BPR MT/WHIP	233.95 mf

AT150 100W A/T	399.95 m
AT180 AT HF+6M	499.95 f
BC35 CHARGER	116.95 m
BP121 7.2V/400 MA	34.95 v
BP130A AA CASE	19.95 m
BP151 6V 800MA	40.95 m
BP152 1100MA/6V	39.95 m
BP157 900MA 7.2V	59.95 w
BP160 700MA 7.2V	35.95 v
BP7 13.2V/450MA	69.95 m
BP83 600MA	49.95 m
CP12 CIG LTR CORD	25.95 m
EX309	19.95 m
EX627 HF ANT SEL	359.95 w
GP22 GPS RCVR	169.95 m
HM46 SPK/MIC	39.95 mf
HM9 SPK/MIC	49.95 m
HM90A WIRELESS MIC	119.95 v
HM92A MIC/IC2700 C/O	89.95 m
HS51 HEADSET	84.95 m
ICDELTA100H 2M/440/1.2G	1124.95 v
ICP4AT 440 HT W/UT50	199.95 mf
ICT2A 2M XCVR	149.95 mf
ICT22A 2M HT	215.95 mf
ICT7A V/U HT	233.95 f
ICW32A 2M/440 HT	299.95 fv
ICX2A 440/1.2GHZ C/O	449.95 m
ICX21AT 440/1.2GHZ C/O	499.95 m
IC2GXAT 2M 3W HT	229.95 f
IC2GXAT/HP 2M 7W HT	249.95 f
IC207H 2M/440 MOBILE	379.95 f
IC2700H 2M/440 MOBILE	399.95 wf
IC2700H/LTD 2M/440	559.95 m
IC2710H 2M/440	459.95 mf
IC281H 2M MOBILE	319.95 f
IC706 HF/6M/2M/SEPKIT	1079 <sup>95</sup> f
IC707 HF XCVR	649.95 f
IC728 XCVR W/MIC	749.95 v
IC738 HF KEYSER/VOX	1229 <sup>95</sup> f
IC775 HF XCVR	3200 <sup>95</sup> v
IC775DSP HF XCVR	3599 <sup>95</sup> mf
LC103 CASE W21	16.95 m
LC123 CASE/IC21A	27.95 v
LC125 CASE/ICT22A	27.95 v
MB16	14.95 m
MB62 MTG BKT IC706	22.95 m
M2 VHF MARINE HT	242.95 w
M56 MARINE XCVR	199.95 m
OPC581 CABLE	54.95 m
PS55 P/S	209.95 v
PS85 P/S	269.95 mf
RC11 REM CNTRL R71A	69.95 m
R1-15 BLOCKED	348.95 mf
R10-05 BLOCKED	449.95 wf
R10011 .1MHZ-1.8G	719.95 v
R71A SWL	1079 <sup>95</sup> w
R71A SWL	1079 <sup>95</sup> fv
R7100-12 RCVR	1199 <sup>95</sup> f
UT30 ENCODER	49.95 v
<b>INNOVA</b>	
06-1310 3AH	39.95 v
<b>JPS</b>	
NF60 DSP/NOTCH FILT	99.95 v
NIR10 DSP BP FILT	179.95 mf
NTR1	114.95 m
<b>KANTRONICS</b>	
HM II+ SOFT	79.95 mf
KAMPLUS TNC	279.95 f
KPC9612/128K	189.95 m
SUPERFAX II	44.95 w
WEFAX WORKS	9.95 m
<b>KENWOOD</b>	
AT50 A/T	299.95 f
DCK2 DC KIT	14.95 m
DFK3B 9' CABLE KIT	35.95 v
DRU3 RECORD UNIT	116.95 v
HMC1 VOX H/S	29.95 v
IF100 INTERFACE TS50S	80.95 v
IF232C INTERFACE	104.95 m
KNB7A 800MA 12V	69.95 m
KSC14 CHRGR	78.95 f
MB201 MT BKT	23.95 v
MC44DM TTP MIC	69.95 m
MC45DM TTP MIC	35.95 v
MC52DM BKLT/DTMF	53.95 v
MC90 DLX MIC	199.95 mv

PB18 1100MA 7.2V	69.95 v
PB32 6V 600MA	19.95 v
PC1A PATCH	116.95 v
PG3B NOISE FILTER	26.95 v
PG3E DC CORD HT'S	19.95 m
PS40 P/S	179.95 f
PS52 HD P/S	239.95 v
PS53 22.5A P/S	224.95 v
SC41 CASE 79A/PB32	21.95 v
SMC31 SPKR MIC	49.95 w
SP31 EXT SPKR	89.95 v
SW2100 MTR	144.95 f
TH22AT 2M 2W	219.95 f
TH22ATH 2M 5W HT	249.95 f
TH235A 2M HT	149.95 f
TH28A 2M HT	249.95 wf
TH79A(D) 2M/440	319.95 f
TM255A 2M SSB/FM	849.95 f
TM742A 2M/440 MOB	629.95 f
TS50S HF XCVR	769.95 f
TS570S HF/6M XCV	1574 <sup>95</sup> v
TS870S HF XCVR	2069 <sup>95</sup> fv
UT50S 6M UNIT	299.95 m
<b>KLM</b>	
CS2 CIR SWITCH	39.95 m
<b>LARSEN</b>	
KD42/70 2M/440 DUCK	24.95 v
KG2/70DUPL ON GLASS	74.95 v
NMOTLP TRNK/MT	23.95 m
NM0150B 2M NO MT	26.95 v
NM0150TLM 2M ANT	43.95 v
<b>MAGELLAN</b>	
MERIDIAN XL GPS	269.95 v
<b>MAHA</b>	
MHPB132B 12/900 NIMH	49.95 m
MHPB132G 12/1200	49.95 m
MHPB8H 8.4/1.8 NIMH	59.95 m
MHFN12 12/900 NIMH	49.95 m
MHFN17 12/900 NIMH	44.95 m
MHPB17 12/900 NIMH	62.95 f
MHPB18 7.2/1.2A NIMH	43.95 v
MHS11 ICO ADPT/MHA302	6.95 m
MHV05S VOX SPK/MIC	34.95 m
<b>MAXON</b>	
GMRS10 100MW UHF HT	59.95 m
MAXON MX49FX 49 MHZ XCV	44.95 f
MAXON MX49HX	44.95 v
MAXON MX49SX/E HDST XCV	26.95 m
MAXON PC10 CH A H/T	24.95 m
MAXON PC10/E	24.95 m
MAXON RD30 RADAR	19.95 m
<b>MFJ</b>	
1020B 3-30 IN ACT RX ANT	62.95 mw
1112 MULT DC OUTLET	26.95 v
1214PC MULTIMODE	124.95 f
1272B TNC/MIC SWITCH	35.95 mv
1272BYV TNC/MIC SW	24.95 m
1272M TNC/MIC SW	24.95 m
1272MYH TNC/MIC SW	35.95 v
1276 PKT/PACTOR TNC	119.95 m
1278B TNC/PACTOR	249.95 f
1287BD 1287B DISK ONLY	19.95 m
1289 5 1/4 MULTICOM	24.95 m
1290D SOFTWARE	19.95 m
1312B 12V/300 ADAPT	10.95 mv
1700B ANT/TX SWITCH	62.95 f
201 DIP METER	99.95 v
247 ANALYZER	129.95 f
287 SPKR/MIC	14.95 m
4114 POWER PACK	58.95 fv
441 SLIM KEYER	54.95 m
451 CW KYBER	79.95 m
452 KEYBOARD KYR	99.95 m
462B MULTI-READER	143.95 v
47B 128K MEM 1270/74	29.95 m
48B 1278B UPGRADE	16.95 m
498 DLX KEYBOARD KYR	149.95 m
5024 CBL ICO/YAE/ALI HT	9.95 m
<b>STANDARD</b>	
CBT160 AA CASE	14.95 m
CCA160 ADAPT	2.95 v
CLC151 CASE C158	14.95 v
CMB600 HELMET CLIP	9.95 m
CMU181 MEM	5.00 m
CNB157 BATT	36.95 m
CNB163 7.2/1 BATT	62.95 m

CNB173 BATT	84.95 m
CTN5600 TONE	49.95 m
C156A 2M HT	179.95f
C168A 2M HT	249.95m
C188A 2M THIN HT	254.95f
C468A UHF HT	239.95m
C528A 2M/440 HT	389.95m
<b>UNIDEN</b>	
BC005 CTCSS	29.95 m
BC3000XLT 400CH	359.95 w
BC350A 50 CH	107.95 v
BC890XLT 200 CH	224.95 mf
BC9000XLT 500CH	386.95 v
ESP26 SPEAKER	14.95 m
EXP9100 900MHZ	179.95 m
HH940 MARINE HT	139.95 m
<b>US TOWER</b>	
SVC PLATFORM FOR HDX55	269.95 m
<b>VAN GORDON</b>	
G5RV-M HF ANT	39.95 m
<b>VECTRONICS</b>	
AT100 ACTIVE ANT	64.95 m
HPF1 HP FILT	9.95 m
PM30HF MTR	64.95 v
PM30UV V/U MTR	71.95 v
VC300M MOB A/T	89.95 mf
<b>WELLER</b>	
WSTA3 IRON	79.95 m
WTCPT STATION	99.95 m
<b>W2A W2DU</b>	
HF BALUN	23.95 v
<b>YAESU</b>	
FT8500/FS10	584.95 w
FT8500/FTS22	646.95 w
G1000SDX	467.95 w
ADMS2C WIN SOFT FT-8500	35.95 mv
CA10 CHG ADAPT	11.95 m
CA15 CHG STAND	24.95 m
CSCV10 CORDURA/FT50	24.95 v
CSC66 FOR FT51R	19.95 m
CSC67 SOFT CASE	16.95 v
CSC68 CASE FT50	13.95 f
CSC69 FOR FNB40	13.95 m
DVS2 DRU	199.95 mv
EDC12 MOB DC ADPTR	34.95 m
EDC5B CIG CORD	24.95 m
FBA12G GREY AA	9.95 m
FC10 TUNER	339.95 f
FNB14 BATT	49.95 v
FNB25G NEVER USED	18.95 m
FNB27 12/600 BATT	49.95 m



		Reg	Sale
<b>COBRA (COB)</b>			
CP-912 900MHz dig sp spec cordless ..Δmf	\$369.95	179 <sup>95</sup>	
<b>UNIDEN (UNI)</b>			
CT-301 Cordless phone ..Dm	\$ 69.95	29 <sup>95</sup>	
DX-3555 25 ch scrambled dual pad cordless	159.95	99 <sup>95</sup>	
DX-4519 25 ch scrambled cordls ph ..Df	129.95	59 <sup>95</sup>	
EXP-9100 900MHz digital spread spec ..Dm	459.95	199 <sup>95</sup>	
XC-3510 25 ch cordless phone ..Dwf	109.95	79 <sup>95</sup>	
<b>CHEROKEE (CHR)</b>			
AH-27 Handheld CB ..	\$169.95	119 <sup>95</sup>	
AH-100 SSB/AM handheld CB ..	399.95	279 <sup>95</sup>	
CBS-1000 SSB/AM Base CB ..	449.95	299 <sup>95</sup>	
<b>COBRA (COB)</b>			
7 Ultra AM Mobile CB ..Dmwf	\$ 59.95	29 <sup>95</sup>	
10 Ultra AT AM Mobile CB w/magnet mt ant	79.95	59 <sup>95</sup>	
18 Ultra AM Mobile CB ..	99.95	69 <sup>95</sup>	
18WX ST Sound Tracker AM Mobile CB w/WX	99.95	79 <sup>95</sup>	
19DX II AM Mobile CB ..	69.95	49 <sup>95</sup>	
19LTD II AM Mobile CB ..	79.95	59 <sup>95</sup>	
19 Ultra II AM Mobile CB ..	69.95	49 <sup>95</sup>	
21LTD WX AM MobileC B w/WX ..	119.95	89 <sup>95</sup>	
25LTD ST Sound Tracker AM Mobile CB ..	149.95	119 <sup>95</sup>	
25LTD WX AM Mobile CB w/WX ..	169.95	109 <sup>95</sup>	
25WX ST Sound Tracker AM Mobile CB w/WX	169.95	129 <sup>95</sup>	
29LTD (29 Classic) AM Mobile CB ..Dmwf	179.95	129 <sup>95</sup>	
29LTD ST Sound Tracker AM Mobile CB ..	189.95	149 <sup>95</sup>	
29LTD WX AM Mobile CB w/WX ..	199.95	139 <sup>95</sup>	
29WX ST Sound Tracker AM Mobile CB w/WX	199.95	159 <sup>95</sup>	
HH-70T AM Remote CB ..	149.95	109 <sup>95</sup>	
93LTD WX AM Base CB w/WX/tone alert ..	189.95	129 <sup>95</sup>	
148F GTL SSB/AM Mobile CB ..	319.95	219 <sup>95</sup>	
2010GTL WX SSB/AM Base CB w/WX ..	539.95	349 <sup>95</sup>	
HH-35 AM portable CB Xcvr ..	89.95	69 <sup>95</sup>	
HH-36ST Sound Tracker handheld CB ..	89.95	69 <sup>95</sup>	
HH-40 5w 40 ch CB walkie-talkie ..Dmwf	159.95	59 <sup>95</sup>	
AT-60 Trunk lip/roof mt CB antenna ..Dmwf	19.95	16 <sup>95</sup>	
AT-70 Magnet mt CB antenna ..	19.95		
FRS-200 Family radio service handheld ..	159.95	129 <sup>95</sup>	
<b>(KEN)</b>			
UBZ-LF14 Family radio svc black handheld ..	\$159.95	149 <sup>95</sup>	
EMC-3 Label clip mic/ear piece ..	43.95		
HMC-3 VOX/boom mic headset ..	72.95		
SMC-34 Spkr/mic/vol cont/function keys ..	67.95		
<b>MIDLAND (MID)</b>			
75-510 Family radio handheld/batt/cgr ..	\$199.95	119 <sup>95</sup>	
22-410 Speaker/mic for 75-510 ..	34.95		
22-430 Throat mic/ear/PTT box; 75-510 ..	69.95		
<b>UNIDEN (UNI)</b>			
PC-66XL AM Mobile CB ..	\$129.95	89 <sup>95</sup>	
PC-76XL AM Mobile CB ..	179.95	109 <sup>95</sup>	
PC-76XLW AM Mobile CB w/WX alert ..	189.95	129 <sup>95</sup>	
PRO-340XL 40 ch portable CB w/rubber ant	89.95	59 <sup>95</sup>	
PRO-350XL 40 ch handheld CB radio ..	169.95	99 <sup>95</sup>	
PRO-501XL AM Mobile CB ..	49.95	39 <sup>95</sup>	
PRO-510XL AM Mobile CB ..	69.95	44 <sup>95</sup>	
PRO-510AXL AM Mobile CB w/mag mt ant ..	69.95	49 <sup>95</sup>	
PRO-520XL AM Mobile CB ..	89.95	59 <sup>95</sup>	
PRO-538W AM Mobile CB w/WX ..	109.95	74 <sup>95</sup>	
PC-122XL SSB/AM Mobile CB ..	199.95	129 <sup>95</sup>	
Grant-XL SSB/AM Mobile CB ..	259.95	169 <sup>95</sup>	
Washington SSB/AM Base CB ..	349.95	249 <sup>95</sup>	
ESP-26 External speaker ..	16.95		
<b>YAesu (YAE)</b>			
VXF-1 Family radio service black handheld ..	\$159.00	139 <sup>95</sup>	
EDC-15 DC adapter ..	38.95		
FNB-53 Nicad battery pack ..	19.95		
MH-34B4B Speaker/mic ..	30.95		
MH-37A4B Earpiece/mic ..	30.95		
NC-66B Wall charger for FNB-53 ..	18.95		
<b>AOR (AOR)</b>			
SC-2700 Soft case for AR-2700 ..Δmv	\$ 19.95	16 <sup>95</sup>	
AR-3000A .1-2036MHz dlx w/SSB/cell bkld ..	1329.95	1049 <sup>95</sup>	
MM-1 Mobile mounting bracket; AR-3000A ..	19.95		
SDU-5000 Spec disp; AR3000A/Icom Base ..	1099.95	899 <sup>95</sup>	
AR-5000 .01-2600MHz scan/cell bkld/spec ord	2199.95	1729 <sup>95</sup>	
AR-8000B .5-1900MHz hand/SSB/cell bkld ..	799.95	599 <sup>95</sup>	
SAC-8000 Opt Scout/AR8000 connect kit ..	14.95		
SC-8000 Soft case for AR-8000 ..	19.95		
<b>BMI (BMI)</b>			
Nitelogger II Auto recorder activator ..	\$ 69.95		
RC-1A Impedance matching patch cord ..	19.95		

		Reg	Sale
<b>GROTHE (GRO)</b>			
VS-2 Emergency vehicle siren ..	\$ 99.00	89 <sup>95</sup>	
VS-2LA Window mt siren/amber light ..	249.95		
VS-2LB Window mt siren/blue light ..	249.95		
VS-2LR Window mt siren/red light ..	249.95		
VS-2LS/A Window mt siren/amber strobe ..	299.95		
VS-2LS/B Window mt siren/blue strobe ..	299.95		
VS-2LS/R Window mt siren/red strobe ..	299.95		
VS-3 Volunteer vehicle PA/horn w/spkr ..	159.00	129 <sup>95</sup>	
VS-4 P/A emergency vehicle siren w/spkr ..	169.00	139 <sup>95</sup>	
<b>CHANNEL MASTER (CHA)</b>			
5095A Base mon ant/5' trimast/50' cbl Dmwf	\$ 59.95	49 <sup>95</sup>	
<b>MAXON (MAX)</b>			
WX-70 Weather monitor w/alert ..	\$ 69.95	39 <sup>95</sup>	
<b>Monitor America (MON)</b>			
Monitor America Scanner frequency book ..	\$ 29.95		
<b>UNIDEN BEARCAT (UNI)</b>			
BCT-2 Pre-prog warning scan/AC ps ..Df	\$239.50	99 <sup>95</sup>	
BC-147XLT-1 16 ch prog scanner/instant WX ..	169.95	99 <sup>95</sup>	
BC-148XLT-1 20 ch prog scanner/WX alert ..	179.95	99 <sup>95</sup>	
BC-178XLT 100 ch prog scan/air/WX alert ..	229.95	139 <sup>95</sup>	
BC-350A 50 ch prog/service search w/AC ps ..	199.95	119 <sup>95</sup>	
BCT-7 Pre-prog warning scan/air/800/AC ps ..	319.95	189 <sup>95</sup>	
BCT-10 Pre-prog highway info sys scanner ..	369.99	169 <sup>95</sup>	
BCT-12 Pre-prog mobile warning scanner ..	349.99	199 <sup>95</sup>	
BC-700A 50 ch prog/svc search/800/AC ps ..	299.95	169 <sup>95</sup>	
BC-760XLT 100 ch prog/svc search/800/AC ps ..	369.95	219 <sup>95</sup>	
BC-003 Switch box for BC-002 ..	10.95		
BC-004 RF preamp for BC-760XLT ..	27.95		
BC-860XLT 100 ch prog scanner/air/800 ..	319.95	189 <sup>95</sup>	
BC-890XLT 200 ch 956 MHz scanner/WX alert ..	439.95	249 <sup>95</sup>	
BC-002 CTCSS tone board; BC760/890XLT ..	51.95		
BC-895XLT 300 ch prog scanner/trunking ..	499.95	329 <sup>95</sup>	
BC-9000XLT 500 ch 25MHz-1.3GHz ..	699.95	429 <sup>95</sup>	
BC-005 CTCSS tone board; 8500/9000XLT ..	37.95		
BC-60XLT-1 30 ch prog pocket scanner ..	169.95	99 <sup>95</sup>	
AD-100 AC adapter/batt cgr ..	16.95		
PS-001 DC power cord ..	8.95		
BC-80XLT 50 ch prog pocket scanner/800 ..	249.95	169 <sup>95</sup>	
AD-140 Extra charger; BC-100XLT/200XLT ..	13.95		
BP-70 Extra battery for BC-70XLT ..Δm	27.95		
BP-200 Extra battery; BC-200XLT ..	26.95		
BP-205 Extra battery; BC-100XLT ..	26.95		
BC-120XLT 100 ch prog pocket w/aircraft ..	249.95	149 <sup>95</sup>	
BC-220XLT 200ch prog pocket/800 MHz ..Dm	439.95	199 <sup>95</sup>	
BC-230XLT 200ch prog pock/air/800/xtra batt	459.95	249 <sup>95</sup>	
SC-150B 100 ch black sport pocket/800 ..	299.95	189 <sup>95</sup>	
AD-70 Extra charger ..	10.95		
BP-120 Extra battery ..	18.95		
LC-120 Carrying case; BC120/230/235XLT ..	19.95		
LC-150B Carrying case for SC-150B ..	19.95		
UA-502 Cig power cord ..	11.95		
BC-235XLT 300ch prog pocket/trunk/xtra batt	499.95	299 <sup>95</sup>	
BP-180 Extra battery ..	16.95		
BC-3000XLT 400 ch 25MHz-1.3GHz pocket ..	699.95	399 <sup>95</sup>	
BP-2500 Extra batt; BC2500/3000 ..Δmf	63.95		
LC-2500 Carrying case; BC-2500/3000XLT ..	20.95		
NPD-001 National frequency book ..	14.95	9 <sup>95</sup>	
RFD-001 IN/IL/KY/OH/MI/WI freq book ..	14.95		
<b>COURIER (COU)</b>			
Procom 2w VHF FM hand-held/batt/cgr ..Δmf	\$199.95	99 <sup>95</sup>	
AUC-12 Cig lighter charger adapter ..Δmw	12.00	4 <sup>95</sup>	
RB-7 Extra nicad battery pack ..Δw	32.00	24 <sup>95</sup>	
M-54 5w 4ch VHF FM hand-held/batt/cgr/151.625	299.95	199 <sup>95</sup>	
M-510 5w 10ch synth VHF FM hand-held ..	399.95	269 <sup>95</sup>	
MU-510 5w 10ch synth UHF FM hand-held ..	439.95	299 <sup>95</sup>	
CKK-510 Cloning cable for M-510/MU-510 ..	18.95		
U-22 2w 2ch 462.575 FM HT/batt/cgr ..Df	279.95	139 <sup>95</sup>	
<b>ICOM (ICO)</b>			
IC-F10-1 2w 146-174MHz 24 ch HT ..Dm	\$495.00	299 <sup>95</sup>	
IC-F20-2 2w 440-470MHz 24 ch HT ..Dm	559.00	339 <sup>95</sup>	
AD-54 Cgr adapt; BM113U; F10/F20 ..Δm	34.00	29 <sup>95</sup>	
BM-113U Trickle charger; F10/F20 ..Δm	26.00	22 <sup>95</sup>	
EX-1690 PC prog software; F10/F20 ..Δm	40.00	34 <sup>95</sup>	
A-22 5w PEP compact Navicom air handheld	720.00	549 <sup>95</sup>	
A-200 Panel mt aircraft Xcvr special order	1069.00	839 <sup>95</sup>	
<b>MAXON (MAX)</b>			
MX-49FX 5 ch 49 MHz ear mic Xcvr ..	\$ 89.95	49 <sup>95</sup>	
MX-49HX 5 ch 49 MHz euro-design headset Xcvr	89.95	49 <sup>95</sup>	
MX-49SX 49 MHz euro-design headset Xcvr ..	59.95	29 <sup>95</sup>	
PC-10 49MHz handheld/PTT/VOX headset ..Dmf	59.95	29 <sup>95</sup>	

PC-50 5ch 49MHz hand-held/PTT/VOX headset	79.95	49 <sup>95</sup>
FRS-114 Family radio service handheld ..	119.95	99 <sup>95</sup>
DV-7510 Wall charger; FRS-114 ..	12.95	
WTA-9F Ear speaker; FRS-114 ..	7.95	
<b>RANGER (RAN)</b>		Reg Sal
RCI-1000 1w 2ch VHF handheld/batt/cgr ..Δmf	\$199.00	139 <sup>95</sup>
DG-10 Desk cgr stand (use wall cgr) ..Δmf	14.95	
LC-1000 Leather case ..Δmf	24.95	
SRA-106A Speaker/mic ..Dmf	44.95	29 <sup>95</sup>
SRA-107 Speaker/mic ..Δmw	44.95	39 <sup>95</sup>
<b>ICOM (ICO)</b>		
IC-M10A (01) 3w marine hand-held/AA holder	\$287.00	179 <sup>95</sup>
M-710 (04) 150w HF marine SSB ..spec order	2100.00	1399 <sup>95</sup>
M-710-05 150w 1.6-27.5MHz SSB ..spec order	2400.00	1599 <sup>95</sup>
AT-130 HF marine auto ant tuner spec order	735.00	499 <sup>95</sup>
<b>KENWOOD (KEN)</b>		
TKM-707 150w HF marine SSB Xcvr spec order	2249.95	1499 <sup>95</sup>
KAT-1 HF marine auto ant tuner ..spec order	999.95	699 <sup>95</sup>
<b>RANGER (RAN)</b>		
RCI-6060 25w VHF marine Xcvr/scan ..Dmf	\$279.00	169 <sup>95</sup>
RCI-8000 5w VHF marine handheld ..Dmwf	279.00	169 <sup>95</sup>
<b>UNIDEN (UNI)</b>		
MC-535 25w 90 ch VHF marine Xcvr ..	\$199.99	119 <sup>95</sup>
MC-635 25w 90ch VHF marine Xcvr/scan Dmwf	269.99	129 <sup>95</sup>
MC-795 25w 90ch VHF marine Xcvr/scan Dmwf	299.99	149 <sup>95</sup>
MC-1010 25w VHF marine Xcvr ..	299.99	149 <sup>95</sup>
MC-1020 25w VHF marine Xcvr ..	319.99	169 <sup>95</sup>
HH-940 5w VHF marine hand-held ..	309.99	159 <sup>95</sup>
HH-955 5w VHF marine hand-held ..	199.99	129 <sup>95</sup>
HH-980 5w 90 ch deluxe marine hand-held ..	399.99	209 <sup>95</sup>
<b>SHAKESPEARE (SHA)</b>		
396-1 3 db, 5' antenna, less mount ..	\$107.50	59 <sup>95</sup>
497 6 db, 8' antenna, less mount ..	88.95	49 <sup>95</sup>
5202 6 db ant w/chrome ferrule, less mt ..	133.95	69 <sup>95</sup>
5206-C Economy 8' ant w/chrome ferrule, no mt	56.95	39 <sup>95</sup>
366H Chrome zamac ratchet mount ..	42.95	29 <sup>95</sup>
495 White plastic lift & lay mount ..	21.50	14 <sup>95</sup>
420 3 db, 5' ant w/fold-down mount ..	97.50	59 <sup>95</sup>
420-M-2 3 db, 5' mast mount ant/coax Δmf	119.50	14 <sup>95</sup>
5204-8 Combo CB/VHF marine 8' ant ..Δmf	192.50	59 <sup>95</sup>
<b>AES 12vdc ACCESSORIES (AES)</b>		
SB-115 AC-DC 5A converter ..	\$ 39.95	
SB-151 300w DC to AC inverter ..	79.95	
SB-155 140w DC to AC inverter ..	59.95	
SC-107 Triple socket lighter plug ..	14.95	
SC-146 Double socket lighter plug ..	12.95	
SC-189 Rechargeable fluorescent lantern ..	49.95	
SC-192 Multi-purpose 4-in-1 12v worklight ..	19.95	
SC-193 12v turbo-vac ..	19.95	
SC-199 Compact cordless spot/yellow casing	29.95	
SC-702 Recharge halogen light, 500K candle	29.95	
SC-784 Quartz halogen spot, 400K candle ..	19.95	
SC-812 Florescent work light/upright stand ..	12.95	
SC-7848 Quartz halogen spot, 1M candle ..	29.95	
<b>X-10 Home Automation/Security (X10)</b>		
CK-11A X-10 ActiveHome automation/win soft	\$119.99	99 <sup>95</sup>
DS-7000 7-piece home security system ..	269.99	199 <sup>95</sup>
PK-9 REX-10 barking dog alarm ..	79.99	69 <sup>95</sup>
DM-10A Motion detector for REX-10 ..	34.99	
AM-466 3-pin grounded appliance module ..	16.99	
AM-486 2-pin polarized appliance module ..	15.99	
DS-10A Long range door/window sensor ..	31.99	
DW-534 Door/window sensor ..	21.99	
KF-574 Key fob security remote control ..	26.99	
LM-465 Lamp module ..	15.99	
MC-460 6 function 8 unit mini controller ..	15.99	
PH-508 Remote 110 db siren ..	59.99	
PR-511 2 floodlite motion detect/rem light ..	64.99	
RW-694 4 unit wireless wall switch ..	21.99	
RW-724 3 unit+dimmer wirelsss wall switch	19.99	
RW-6900 Wireless wall switch set ..	31.99	
SC-503 6 function 16 unit maxi controller ..	29.99	
SH-10A Indoor 90 db remote alarm siren ..	31.99	
SP-554A Wireless motion detector ..	59.99	
SR-227 Wall receptacle module/custom plate	21.99	
TH-2807 Thermostat set-back controller set ..	21.99	
WS-467 Wall switch module ..	15.99	
<b>PrimeCo PCS PHONES (PRI)</b>		
111597/111589 QCP1900 PCS phone ..mf	\$199.00	
110108 Extra lithium ion battery ..mf	59.99	
110174 Cigarette adapter ..mf	29.99	
110180 Black carrying case ..mf	19.99	
110181 Portable hands-free kit ..mf	89.99	





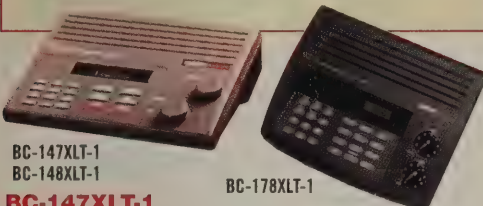
## Scan the Action!

**Ham Radio • Police • Sheriff • Fire  
Emergency • Highway Patrol  
Paramedics • Weather • Auto Races  
Sports Events • More !**

**VHF Low/High & UHF** — Police, fire, sheriff, ambulances in smaller cities/towns. State police. Railroads. VHF-marine. 2-meter & 70cm Ham. Businesses. NOAA weather. Government.  
**VHF-Air** — Commercial & private planes. Airport towers. Aviation-related communications. Air navigation.

**800MHz** — Police, fire & emergency services in major cities and metro areas (trunked). Some business 2-way radio systems. (Cellular frequencies are blocked.)

**Extended Coverage** — Military aircraft. Amateur radio. Some wireless microphones. Some radio/TV remote links. Microwave communications.



BC-147XLT-1  
BC-148XLT-1

BC-178XLT-1

### BC-147XLT-1

16 channel Base unit with 10 bands, including weather. Covers 29-29.7, 29.7-50, 50-54, 136-144, 144-148, 148-174, 406-420, 420-450, 450-470 & 470-512 MHz. Two-digit LED display for current channel selection & scanning. Keyboard Entry; Direct Channel Access; Manual Step Tuning; Lockout; Priority; Review; Weather Search; Automatic Squelch; Track-Tuning; Memory Backup. 9" w x 2 3/4" h x 6 1/2" d, 1.2 lbs..... **\$99<sup>95</sup>**

### BC-148XLT-1

20 channels, 10 bands with weather alert. Digital; Programmable; AC/DC operation. Frequency coverage: 29-54, 136-174 and 406-512 MHz. Weather; Priority; Lockout; Squelch. AC adapter & telescoping antenna. 9" w x 2 3/4" h x 6 1/2" d, 1.2 lbs ..... **\$99<sup>95</sup>**

### BC-178XLT

100 channel programmable Base unit with aircraft. 11 bands, 5 scanning banks. LCD display; TurboScan™ & search; Weather scan & search; 5 priority channels; Data skip; Service search; Automatic squelch; Programmable delay. AC adapter. 9" x 6 1/2" x 2 1/4", 1 lb. 7 oz ..... **\$139<sup>95</sup>**



BC-350A

50 channel Mobile or Base unit with Aircraft; 11 bands, LCD display; Super TurboScan™ @ 100 channels per second. 20 programmable Private Channels; 20 programmable Police Channels; 10 programmable Fire & Emergency channels. Band scan for aircraft; Marine & Weather; Band search. Mounting bracket; AC adapter, DC & cigarette power cords included. 5 1/4" x 6 1/2" x 1 1/4", 1 lb. 11 oz..... **\$119<sup>95</sup>**

### BC-700A

50 channel programmable Mobile/Base unit with Aircraft. 12 bands, LCD display, Turbo Scan™. Same as BC-350A w/800MHz (no cellular). **\$169<sup>95</sup>**



BC-760XLT

### BC-760XLT

100 programmable channels, 5 scanning banks, 12 bands + Weather. Covers 29-54, 118-136, 144-174, 406-510, 470-512 & 806-956 MHz (no cellular). Auto search; Priority. 13.8V DC, AC adapter. 6" w x 1 1/2" h x 7 1/4" d, 1 lb, 3 oz ..... **\$219<sup>95</sup>**



BC-895XLT

### BC-895XLT "TRUNKTRACKER"

300 channels, 12 bands including Aircraft and 800 MHz. 10 banks. Covers 29-956 MHz (cell blocked). Turbo™ Scan; One-touch weather; Weather alert; Manual channel access; Built-in CTCSS; Trunk search; Scan lockout & delay; RS-232C port; VFO control; 10 priority channels; Signal strength meter; Auxiliary tape output; Automatic store; 30 trunking channel indicator annunciators; Three-Day Memory backup; Programmable search; Channel lockout key. 10 1/2" w x 3 3/4" h x 7 1/2" d, 3 1/2 lbs ..... **\$329<sup>95</sup>**

BC-860XLT  
BC-890XLT



### BC-860XLT

Programmable with Aircraft. 100 channels, 12 bands, 10 banks. Covers 29-956 MHz (cell blkd). Full frequency LCD display; TwinTurbo™ Scan & Search; One-touch weather; Manual channel access. 9" w x 2 1/4" h x 6 1/2" d, 1.2 lbs ..... **\$189<sup>95</sup>**



BC-9000XLT

### BC-890XLT

200 channel programmable for Mobile or Base with Aircraft, Military Air & 1 1/4 meter Ham Band. 14 bands, 10 scanning banks. LCD display, TurboScan™; 10 priority channels; VFO; Frequency transfer; Autostore & sort; Count; Weather alert; Opt. CTCSS; AC adapter. 10 1/2" x 7 1/2" x 3 1/2", 3 1/2 lbs **\$249<sup>95</sup>**

### BC-9000XLT

500 channel continuous band scanner, covers 25-1300 MHz (cell blkd). 20 banks. VFO control; Ten priority channels; AM-FM/wide & narrow FM modes; TurboScan™ and Search; LCD dot matrix alpha display; Data skip; Transfer; Automatic store; Aux. line output for recording; AC adapter, optional CTCSS. 10 1/2" x 7 1/2" d x 3 1/2" h, 4 lbs..... **\$429<sup>95</sup>**



BCT-7

### BCT-7

**Bear Tracker 800** Pre-programmed with all frequencies for Highway Patrol, D.O.T, Local/County Police, News, Fire, Aircraft & CB. Selectable by state (except Hawaii). 12 bands, 100 user programmable channels: Highway Patrol Priority Alert; Data Skip, Weather Scan. AC adapter & mobile mt included. 13.8VDC, 5" w x 7" d x 1 1/2" h, 1 lb, 11 oz..... **\$189<sup>95</sup>**

### BCT-10

### BearTracker Highway Information System

A sophisticated highway alarm system with 886 pre-programmed frequencies that responds to radio signals emitted from special secondary transmitters installed on most highway patrol vehicles. Audible & visual alarms, plus signal strength LEDs indicate the presence & distance of patrols. **\$169<sup>95</sup>**

### BCT-12

### BearTracker Highway Information System

Covers low, high, UHF & 800MHz Highway Patrol, Police, Sheriff, Weather, News & Transportation frequencies for all 50 states and Canada. Weather emergency tone alert, priority, channel lockout, digital signal meter level meter..... **\$199<sup>95</sup>**



BC-60/80XLT

BC-120/230XLT

BC-3000XLT

BC-235XLT

### BC-60XLT-1

30 channel, programmable handheld scanner. 10 bands, 29-512 MHz. Full frequency LCD display; Programmable chain search; One touch weather; Lockout; Memory backup; Low-battery indicator; Keypad lock; Built-in scan delay; Manual channel access; Track tuning; Keypad lockout, AC/DC operation with 4-AA alkaline or nicads or included AC adapter. 2 1/2" w x 6 3/4" h x 1 1/2" d, 10 1/2 oz ..... **\$99<sup>95</sup>**

### BC-80XLT

50 channel, programmable handheld scanner. Covers 29-956 MHz (cell blkd). 11 bands, 5 banks, 5 priority channels, one touch weather. Manual channel access; Bands search; Full frequency LCD display; Battery-low indicator. DC or AC operation with 4-AA Nicad or alkaline batteries (not included) are required for DC operation. 2 1/2" w x 6 3/4" h x 1 1/2" d, 10 1/2 oz ..... **\$169<sup>95</sup>**

### BC-120XLT

100 channel, programmable handheld scanner with Aircraft coverage. 11 bands, 10 scanning banks, LCD display, Turbo Scan™ and search. One-touch weather, 10 priority channels, data skip, memory backup. Belt clip, battery and wall charger included. 2 1/2" w x 1 1/4" d x 6" h, 12 1/2 oz ... **\$149<sup>95</sup>**

### BC-230XLT

200 channel, programmable handheld scanner with Aircraft & 800 MHz (cell blkd). 12 bands, 10 scanning banks. Programmable search. LCD frequency display, Turbo Scan™ and search. One touch weather access, 10 priority channels, data skip, memory backup. Belt clip, extra battery, wall charger. 2 1/2" w x 1 1/4" d x 6" h, 12 1/2 oz..... **\$249<sup>95</sup>**

### BC-3000XLT

400 channel, continuous band scanner. Covers 25 to 1300MHz (cell blkd) in 12 bands. 20 scanning banks, 10 priority channels. VFO control; TurboScan™ and search, auto-weather, auto-store; channel lockout. Rechargeable nicad battery and charger. 2 1/2" w x 1 3/4" d x 6" h, 12 1/2 oz ..... **\$399<sup>95</sup>**

### BC-235XLT "TRUNKTRACKER"

300 channel, programmable handheld scanner. 12 bands including Aircraft & 800 MHz, 29-956 MHz (cell blocked). Programmable search; Trunk lockout; Memory backup; Trunk delay; Manual channel access; Trunk scan; Preprogrammed service search; Trunk search; Channel lockout; 10 priority channels; AC/DC operation with 2 rechargeable nicads & charger. 2 1/2" w x 6" h x 1 1/4" d, 12 1/2 oz..... **\$299<sup>95</sup>**

### UNIDEN SC-150B

### "SPORTCAT" 100 channel pro-

grammable handheld scanner with Aircraft, Weather & 800 MHz band (cell blkd). Designed for the racing fan with 10 one-touch, Direct Access keys for instant selection of active sports channels. Motor Racing, Air Shows & Special Events. 12 bands; 10 scanning banks; LCD display; Programmed band search; Data skip. TurboScan™ scans at 100 channels/second, allowing instant access to up to 100 memorized frequencies in the 29-54, 108-174, 406-512 & 806-956 MHz band. 10 preprogrammed TurboSearch™ keys allow band-edge to band-edge frequency locating at 300 channels/second. Rechargeable battery, wall charger, flex. antenna, belt clip & ear-phone. 2 1/2" w x 1 1/4" d x 6" h, 12 oz., Black.... **\$189<sup>95</sup>**





## AR-3000A

Professional-grade Desktop Scanner and Receiver for serious wide-spectrum monitoring. Continuous AM/FM/SSB tuning from 100kHz to 2036 MHz (cell blkd) via keypad or dial. 400 memory channels. Scans and searches at 50 channels per second. 15 band-pass filters & low noise, wide dynamic range GaAs FET RF amplifiers. Backlit LCD display, programmable tuning steps, priority, delay, recorder activator. Requires 9 to 16V DC. Includes 120V AC adapter, BNC telescopic whip and DC lead. 5½" x 3" h x 7½" d, 2.5 lbs... **\$1049<sup>95</sup>**



## AR-5000

All-mode, super-wide coverage receiver, tunable from 10kHz - 2600MHz (cell blocked). 650 memories, 50 channel-per-second scan & search, 1Hz to 1MHz programmable tuning step, selectable IF bandwidths. 12VDC/120V. Special Order **\$1729<sup>95</sup>**



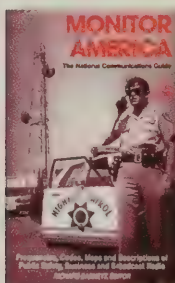
## AR-8000B

Feature packed Handheld Scanner. Covers 500kHz to 1900MHz (cell blocked). High visibility dot matrix LCD readout provides great detail including: Signal strength bar meter; Bandscope; Dual VFOs displayed simultaneously; Alpha numeric comments stored along with frequency, mode, attenuation, and more! 1000 memories with 20 banks of 50 channels. Step sizes 50Hz to 1MHz. Scan/Search speed

up to 50 channels per second. Computer control & cloning allows up/down load of frequencies, mode, step size and more with your computer or share your memories with a friend (requires optional cables) Internal ferrite antenna operates below 2MHz. With 4-AA nicads & charger. **\$599<sup>95</sup>**

## AOR SDU-5000

RF Spectrum Display Unit. Provides a visual indication of stations above and below your receiving frequency. Even if transmissions are short, you can watch for stations to pop-up over the 10MHz window, then zero in. Menu-driven system for EZ operation. A 3.1" matrix color LCD display with resolutions of 5 or 30KHz. A companion to the AOR AR-3000A or other receivers with 10.7MHz output .... **\$899<sup>95</sup>**



## MONITOR AMERICA

Third edition, 1108 pages. A complete listing of public safety and business radio communications of almost every community in the nation. Includes maps, tone codes and repeater input and output frequencies. Listings of AM and FM radio stations with frequencies and formats. Race car teams, special sections of Disney and other aviation spots, much more..... **\$29<sup>95</sup>**

## Family Radio Service

Perfect communication for

Vehicle to vehicle on trips • Hunting • Fishing  
Camping • Biking • Shopping • Hiking • Climbing  
Sporting events • Family activities • Just fun!

## NO FCC LICENSE REQUIRED

No Test, No Fee - Just Use It!

Free air time • No cellular fees or time limits • Clear audio quality • Auto squelch reduces unwanted noise • Great range - Up to 2 miles depending on terrain • Auto Power Save extends battery life

14 Special UHF FM Channels - 462.5625 to 467.7125 MHz in 50kHz steps



## VXF-1

- Coded squelch - private listening
- 4 AA alkaline (500mw)
- 4" h x 2½" w x 1" d ..... **\$139<sup>95</sup>**

## KENWOOD

### UBZ-LF14

- Coded squelch - private listening
- Call tone paging
- 3 AA (300mw)
- 4" h x 2½" w x 1½" d ..... **\$149<sup>95</sup>**



## 75-510

- Coded squelch
- 4 AA NiCad (incl) 500mw
- 4½" h x 2½" w x 1½" d .... **\$119<sup>95</sup>**



## FRS-200

- Up/down channel and volume buttons
- Lighted LCD display
- 4½" h x 1¾" w x 1¾" d ... **\$129<sup>95</sup>**



## FRS-114

- Frequency set by 4 Dip Switches
- 4 AAA alkaline (not incl)
- 4" h x 2½" w x 1¼" d ..... **\$99<sup>95</sup>**

## maxon Personal Communicators SYSTEMS

Low Power • 1/4 mile average range • No license

Dual conversion superheterodyne receiver provides crisp, clear voice transmission. Compatible use for group communications. Push-to-talk (PTT) or Voice activated (VOX) lets you talk-to-transmit.

CHANNELS: (A) 49.830 MHz (B) 49.845 MHz  
(C) 49.860 MHz (D) 49.875 MHz (E) 49.890 MHz

## MX-49SX

A single-channel unit featuring a lightweight adjustable headset with retractable whip antenna and boom-microphone with windscreen. LED power indicator, battery charger jack. Range up to 1/4-mile. Requires (2)-AA alkaline or rechargeable nicad batteries. 5" w x 2½" h x 1" d, 9 oz. Channel A, B, or E..... **\$29<sup>95</sup>**



## MX-49FX

5 selectable channels. The unique earphone/microphone picks up voice vibrations from the ear canal for the transmit, audio and also provides received audio. Will not interfere with helmets. Built-in antenna

gives up to 1/8-mile range. Remote PTT button & channel selector. Requires (3)-AA batteries. 5½" w x 3" h x 1" d 6 oz. Channels A, B, C, D & E..... **\$49<sup>95</sup>**

## MX-49HX

5 channels, great for motorcycling, snow mobiling, etc. The helmet-adaptable headset has a whip antenna and boom microphone with windscreen. VOX or PTT with on-unit or remote switch. Front mounted off/on and volume, VOX sensitivity and channel selector. Jacks for optional passenger intercom headset. Requires (3)-AA batteries. 5½" w x 3" h x 1" d, 6½ oz. Channels A, B, C, D & E..... **\$49<sup>95</sup>**



## Low Power VHF & UHF Handhelds

Ideal for Short Range Communications

- Recreation
- Construction
- Factories
- Security etc.



**COURIER M-510** 10 synthesized VHF channels programmable from 144 to 174MHz. Full 5W output. Rechargeable nicad battery, AC charger, flexible antenna, F.C.C. license is application included. 4½" h x 2½" w x 1¾" d, 15 oz ..... **\$269<sup>95</sup>**

**COURIER MU-510** 10 synthesized UHF channels programmable from 450MHz to 470MHz. 5W output. Rechargeable nicad battery, AC charger, flexible antenna, F.C.C. license application is included. 4½" h x 2½" w x 1¾" d, 15 oz ..... **\$299<sup>95</sup>**

**COURIER M-54** Four VHF channels, 5W. 151.625 MHz installed. 5½" h x 2½" w x 1¾" d, 15 oz. **\$199<sup>95</sup>**

**RANGER RCI-1000** Two VHF channels, 1W output. Two sets of crystals installed for 151.625 & 154.57MHz or 154.60 & 154.57MHz. Rechargeable nicad battery and AC charger, flexible antenna. 4½" h x 2½" w x ¾" d, 12 oz ..... **CLOSEOUT \$139<sup>95</sup>**



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## SPECTRUM FCC DATABASE CD ROM

by PerCon Corporation

A nationwide frequency database with over 3 million records. The data includes: Frequency; Call sign; Class of Station Code; Radio Service Code; Company Name; Transmitter City/County/State/Latitude & Longitude, and number of units for Vehicle, Marine, Aircraft, Portable, and Pagers. Records for police, hospitals, fire, state and local governments, businesses, airlines, theme parks, broadcasting and much more. Six difference searches. IBM compatible; 386 or higher processor. Macintosh: System 7 or higher ..... **\$29<sup>95</sup>**





## PCS DIGITAL PHONES

Providing a level of call quality previously unheard of in wireless - Less static & fewer dropped calls. Calling that's so clear, it almost sounds like a home phone.

- Operates on the new 1.8GHz PCS band • Crystal-Clear Voice Quality • Lithium Battery - talk up to four hours on receive calls for up to two days without recharging • Caller ID • Call Restriction • Voice Mail with Mail Notification • Call Waiting • Call Privacy • Anti-Fraud Control • No Long-Term Service Contracts • No Activation Fee

**PRIMECO Digital Phones are currently available through our Milwaukee & Orlando stores, only.**

At this time service areas are somewhat limited. Please CALL 1-800-558-0411 or 1-800-327-1917 for up to date coverage information & Pricing.



## uniden

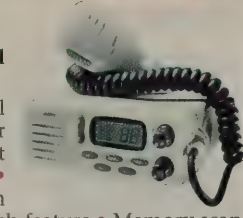
### MC-1010 80 channel Marine VHF Radio

- All USA & International Channels, 10 weather channels • Ultra compact rugged construction • New durable design microphone • Triple watch feature • Memory scan • weather scan • 25 & 1W power output • LCD display • External speaker jack 12V DC @ 4.5A • 6 1/2" w x 4 1/2" d x 2 1/2" h, 1 lb, 12 oz..... **\$149<sup>95</sup>**

**MC-1020 80 channel Marine VHF Radio** All USA & International Channels, 10 weather channels • Ultra compact rugged construction • Quik Command™ microphone with touch channel 16 & 19 key • Triple watch Plus™ • Memory scan • weather scan & alert • High/low power (25 & 1W) • LCD display & dimmer, back lit keypad • Public address • External speaker jack 12V DC @ 5A • 6 1/2" w x 4 1/2" d x 2 1/2" h, 1 lb, 12 oz..... **\$169<sup>95</sup>**

### MC-535 80 channel Marine VHF Radio

- All USA & international & 10 weather channels • Instant channel 16 • Memory scan • Dual watch • LED channel display • 25 & 1W power • Weather resistant • Front speaker, external speaker jack • 12VDC @ 5A • 6 1/2" w x 7 3/4" d x 2 3/4" h, 2.4 lbs ..... **\$119<sup>95</sup>**



### HH-980 Deluxe 90 channel Marine VHF Handheld

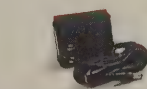
- Microprocessor controlled • All USA & International Channels, 10 weather channels • Weather alert • Front-fire speaker • Watertight operation • All channel scan • Instant channel 16 • 5/1W-selectable power • Dual watch/Triple watch • LCD channel display • 7.5V @ 850mA from supplied rechargeable Nicad battery pack • 2 3/4" w x 1 1/2" d x 5 3/8" h, 1 lb, 12 oz ..... **\$209<sup>95</sup>**

### HH-940 90 channel Marine VHF Handheld

All USA & International Channels, 10 weather channels • All channel scan • 1W output • Electronic touch keypad • Backlit LCD display • Triple watch • Instant channel 16 & 9 • Weather alert • Flexible rubber antenna • Keypad lockout • Battery charge indicator • Waterproof, lightweight & wearable • Rechargeable battery, drop-in charger • 2 1/2" w x 1 1/4" d x 4 1/2" h, 8.8 oz .... **\$159<sup>95</sup>**

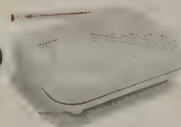
### HH-955 90 channel Marine VHF Handheld

All USA & International Channels, 10 weather channels • Memory scan • Backlit LCD display • Triple watch • Instant channel 16 & 9 • Weather alert 5/1W power • Flexible rubber antenna • Keypad lockout • Battery charge indicator • Weather resistant housing • Uses alkaline batteries or Ni-cad rechargeable battery (not included) • 2 1/2" w x 1 1/4" d x 6 1/2" h, 19.5 oz... **\$129<sup>95</sup>**



### WX-70

**Weather Monitor** • Receives weather service broadcasts on seven N.O.A.A. stations: 162.550, 162.400, 162.425, 162.475, 162.450, 162.500, and 162.525MHz. Three different severe weather "Alert" warning modes. 110V with supplied AC adapter, uses a 9V battery for back-up ..... **\$39<sup>95</sup>**



**maxon**  
SYSTEMS  
**Weather Monitor**



### IC-M10A Miniature Handheld Marine VHF Radio

Programmable for all USA and International Channels & Weather • Independent Channel 16 • 24 Memories • Full Function & Priority Scanner • Dual/Tri-watch • 3 Watts output • Power-Saver • Large backlit LCD display • CALL key for hailing channels • "AA" Alkaline battery pack provides 2-14 hours operation for each set (Batteries not included). 2 3/4" w x 1 1/4" d x 4 3/4" h, 12 oz .. **\$179<sup>95</sup>**



### ICOM M710 SSB MARINE Transceiver

Rugged, 150W SSB Transceiver, 1136 channels with 160 user-programmable memories, PC programmable, alpha numeric readout on large LCD.

**IC-M710 (04)** General version without 2182kHz alarm, marine bands only. . **Special Order \$1399<sup>95</sup>**

**IC-M710 (05)** Open version, covers 1.6 to 27.5 MHz, has 2182kHz alarm **Special Order \$1599<sup>95</sup>**

## KENWOOD

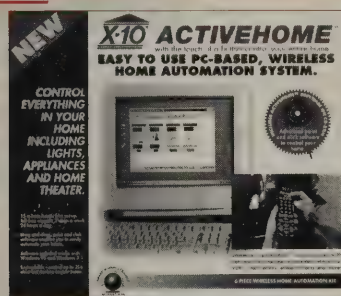
### TKM-707 SSB Radiotelephone

High performance unit designed to meet the stringent demands of marine operation. Utilizes a heavy duty rustproof aluminum chassis and the highest quality parts to maximize performance.

- 150W RF Output Power • 2MHz to 23MHz Marine Band Operation with 500kHz to 30 MHz General Coverage receiver • 198 Memory Channels • Multi-Scanning • 2182kHz emergency alarm built-in & More!

**Special Order - \$1499<sup>95</sup>**

## X-10 ACTIVEHOME



### Wireless Home Security

X-10 is a leader in the field of wireless home security and home automation. AES and this industry leader have teamed up to bring you these state-of-the-art products. Protect your family and your electronic equipment! AES has complete systems or you can design your own from the list of X-10 products & accessories.

The home security will monitor doors and motion sensors can cover wide areas in or around your house. You can even have the system call a friend or neighbor if its activated. You can ward off potential problems with the sound of REX. Rex is a fierce sounding electronic barking dog.

Home automation is here now and X-10 provides it! Hot coffee automatically in the morning, turn lights on/off automatically or at the push of one button. Turn the heat up and down. Set it up to run from your PC! & more!..... **See Price List**



### IC-A22 VHF Air Band Transceiver

Covers (COM) 118-.136.975, (NAV) 108-117.95MHz and memory channels • Programmed scan, memory scan and lock • 5W output • Instant 121.5MHz • NAV features: 200 channel VOR nav with CDI, radial heading TO/FROM VOR, Auto Bearing Set • Semi-duplex, combines VOR/COM operation • Includes Ni-cad rechargeable battery and wall charger • 2 1/2" w x 7 3/4" h x 1 1/2" d, 1.4 lbs ..... **\$549<sup>95</sup>**



### SHAKESPEARE Marine Antennas



**5202 (A)** Collinear-phased 5/8-wave elements. 8 ft. long, 6dB gain, handles 50 Watts. DC grounded. Chrome-plated brass ferrule. Includes 20 ft. of coaxial cable with PL-259 connector.... **\$69<sup>95</sup>**

**497 (B)** Collinear phase 5/8-wave elements. 8 ft. long, 6 db gain., handles 50 W-not DC grounded. Smaller diameter absorbs flex. Includes 20 ft. coaxial cable and PL-259 connector..... **\$49<sup>95</sup>**

**5206-C (C)** Economy model, 8' long, end fed with 6dB gain. Handles 50 Watts, DC grounded. 15 ft. coaxial cable & PL-259 connector... **\$39<sup>95</sup>**

**420 (D)** Center-fed 1/2-wave coaxial sleeve model. 3dB gain, 5 ft. long. Polycarbonate lift-and-lay deck mount with leveling plate, hardware and 20 ft coax cable/connector..... **\$59<sup>95</sup>**

**495 (E)** Lift-& lay polycarbonate deck mt.... **\$14<sup>95</sup>**

**366H (F)** Ratchet antenna mount with release handle for deck or bulkhead mounting. Has 9/32" hole for Loran cable. Standard 1"x14 male threads. Chrome plated zamac..... **\$29<sup>95</sup>**



## DRAKE

### SW-8

#### Communications Receiver

Covers 100kHz to 30MHz, 87 to 108MHz (FM stereo with headphones), and 116 to 136MHz Aircraft. 70 scannable memories. Standard and synchronous detection AM, selectable SSB reception on the Medium and Shortwave bands. Direct frequency entry keypad, 0.5uV sensitivity, dual-6 or 4 kHz AM selectivity, 2.3kHz SSB selectivity. High contrast LCD readout; 100Hz tuning accuracy. Dual-mode clock and timer. AC adapter supplied, or use optional batteries for portable operation. 11" w x 5 1/2" h x 11 1/2" d, 10 lbs ..... **\$799<sup>95</sup>**



### R-8B

#### Communications Receiver

Covers 100kHz-30,000kHz + 35-55 MHz with optional VHF converter. Alpha-numeric display, kHz and mHz modes; dual VFOs; 1000 memories; multi-function scanning; AM/FM RTTY/CW/LSB/USB modes; 5 voice bandwidth filters; built-in preamplifier and attenuator; built-in noise blanker; IF shift and notch. S-meter; dual time zone clock; passband offset; selectable AGC; built-in speaker; dual timers, multiple antenna inputs; sequential tuning; 3 selectable tuning step sizes. Direct entry of mode and bandwidth selection via keypad. Selectable sideband, synchronous AM detector. RS-232 computer control capable. Optional interface software for MS-DOS computers. Connections for external speaker and tape recorder. Multi-voltage power supply. 13 1/2" w x 5 1/2" h x 13" d, 13 lbs ..... **\$1199<sup>95</sup>**



### SW-1

#### Shortwave Receiver

Covers 100kHz-30MHz. Synthesized microprocessor controlled tuning, 32 programmable memories. Easy tuning with Tuning Dial; Up/Down Buttons or Direct Keypad Entry. Dual antenna inputs for coaxial feedline or wire antenna. 12V or AC adapter supplied. 10 1/2" w x 4 3/8" h x 7 3/8" d, 4.7 lbs ..... **SPECIAL \$249<sup>95</sup>**

### SW-2

**Shortwave Receiver** • Same as SW-1 except - SSB; Synchronous detection; 100 memories; larger display; Dimmer; Rear speaker jack. Improved sensitivity and selectivity. Optional convenient infrared remote control unit ..... **\$499<sup>95</sup>**

## PANASONIC

### RF-B45

#### Portable Receiver

Covers 144-288kHz, 520-1610kHz, 1.62-29.99MHz and 87.5-108MHz.

Capable of SSB reception. Six Way multi-tuning system: 18-station preset memory, frequency direct access, meter band access, up/down manual tuning, memory search with signal strength and auto tuning. LCD display, quartz clock with sleep timer, high/low tone selector, DX/Local selector. Deluxe carrying case, ext. antenna wire for shortwave reception, hand strap and earphone included. Requires (4) "AA" batteries. 4 1/2" h x 8 1/2" w x 1" d, 1.6 lbs ..... **CLOSEOUT \$169<sup>95</sup>**



## SONY

### ICF-SW10

Compact and convenient, easy to use. 12 bands; covers AM broadcast, FM (stereo with headphones) and 9 shortwave bands. Easy analog tuning with tuning indicator for accuracy. 6" w x 3 1/2" h x 1 1/2" d, 12 oz. .... **\$49<sup>95</sup>**



### ICF-SW30

12 bands; covers AM, FM (stereo with headphones) and 10 shortwave bands. Automatic Scan Tuning in 1 KHz steps, 15 memory presets. The clock has world and local time display, alarm and sleep timer functions. Requires three "AA" batteries or external 4.5V DC. Size: 4 1/2" h x 6 1/2" w x 1 1/2" d. .... **\$99<sup>95</sup>**



### ICF-SW55

**World Band Receiver.** Similar to ICF-7600G (below), but improved. Factory preset name tuning provides access to most listened to broadcasts. Tuning methods: preset station, direct, scan or rotary dial. 125 memories. Requires 4 "AA" batteries or external 6V, AC adapter included. 4 1/2" h x 7 3/4" w x 1 1/2" d, 1 1/2 lbs ..... **CLOSEOUT \$299<sup>95</sup>**

### ICF-SW1000T

**World Band Receiver.** Includes a full-featured Sony Stereo Cassette Recorder and Player built in to the back of the unit. Provides 1 kHz step tuning LW/MW/SW/FM & SSB mode reception with synchronous detection via manual or 10 key direct access and 32 memory presets. FM stereo reception via headphones. Built-in clock with alarm and sleep timer. Timer Record and Play feature allows convenient time shift recording. Stereo microphone and headphones, active antenna and carrying case are supplied ..... **\$549<sup>95</sup>**



### ICF-2010

Covers 150kHz-30MHz, 76-108MHz and 116-136MHz MHz; AM/FM/SSB/CW. Tunes manually or by keyboard entry, automatic scanning, memory scan or 32 memory presets. LCD display with light, switchable IF bandwidth, fine tune. Convenient 12 and 24-hour clock with alarm, programmable timer and sleep timer. Telescoping antenna and built-in ferrite bar antenna. Nice sounding 4" speaker. Record, earphone, external antenna and external DC power jacks. Operates from three "D" and two "AA" batteries, external 12V DC, or 110V AC adapter. 6 1/2" h x 11 1/2" w x 2 1/2" d, 3 1/2 lbs ..... **\$359<sup>95</sup>**



### ICF-SW77

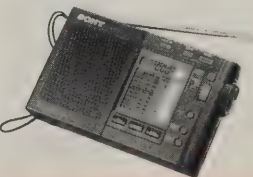
Same coverage (except for air band) and same features as the ICF-2010 (above). Manual or keypad frequency entry. Stores up to 100 stations (162 frequencies), allows stations to be selected by name and is capable of storing your favorite broadcast schedules. Programmable six-character Station Name Display, fine/accurate 50 Hz tuning resolution, FM stereo with headphones. Bass and treble controls. 10 1/2" w x 6 1/2" h x 1 1/2" d, 3 1/2 lb ..... **\$469<sup>95</sup>**

### ICF-SW7600G

**World Band Receiver** • Covers 150kHz to 30MHz and 76 to 108MHz FM; stereo with earphones. Synchronous AM detection, SSB capability. 10-key Direct Access Tuning™ and 20 station presets, LCD display. Tone control, external antenna and recording jacks, clock and timer with sleep and standby functions, tilt bracket. Includes compact reel-out antenna, and carrying case. Requires (4) "AA" batteries. 4 1/2" h x 7 3/4" w x 1 1/2" d, 1 1/2 lbs... **\$189<sup>95</sup>**

### ICF-SW100S

The size of a Pocket Calculator, but loaded with advanced features. Covers 150kHz to 30MHz and the 76 to 108 MHz FM band; stereo when used with earphones. SSB reception capable, 100 Hz tuning, steps, 50 memory presets, 24 hour clock/timer, world time computer, station names display, illuminated LCD display. AC adapter, stereo earphones, active antenna, soft carrying case, station directory & manual are included. 4 1/2" h x 2 1/2" w x 1 1/2" d .... **\$349<sup>95</sup>**



### SONY ICF-SW40

#### Compact World Band Portable

Covers SW/MW/LW. PLL synthesized provides easy 1 kHz-step digital tuning via tuning knob with fine or normal switch. FM stereo with headphones. 20 memory presets, built-in clock and sleep timer. Two timer standby. Requires 3 "AA" batteries. 6 1/2" w x 4 1/4" h x 1 1/2" d, 1 1/2 lbs ..... **CLOSEOUT \$99<sup>95</sup>**

## MFJ

### 8100

#### Shortwave Regenerative Receiver

RF stage for great sensitivity, goes into regeneration smoothly without pops or dead spots. Stations world-wide come in loud and clear with just a 10 ft. wire. Listen to international SW broadcasts, hams on SSB and CW, RTTY, packet & more!. Covers all or part of the 75 to 13M SW bands. Smooth Vernier drive reduction tuning. Rugged aluminum cabinet. Uses a 9V battery or ext. DC. Two jacks for Walkman-type earphones or plug-in speakers. 7" w x 2 1/2" h x 6" d, 1 lb

8100K (kit) **\$59<sup>95</sup>** • 8100W (wired) **\$79<sup>95</sup>**





## SANGEAN

### ATS-202 Ultra Compact • Superb Performance

PLL synthesized Digital World Band Receiver. 5 bands, covers 2.3 to 7.3 and 9.5 to 26.10MHz. AM, FM; stereo with headphones. Manual and automatic station search, 20 station memory presets. Large backlit LCD display, clock with alarm and sleep timer features. MW 9k/10k switch. Low battery indication. Requires (2) "AA" batteries or ext. 3V DC. 5 1/2" w x 3 3/4" h x 1 1/4" d, 8.7 oz. .... **CLOSEOUT \$89<sup>95</sup>**

### ATS-303

PLL synthesized. 13 bands, covers 2.3 to 7.3 and 9.5 to 26.10MHz. AM, FM; FM stereo with headphones. Selectable continuous tuning across frequency range and/or shortwave band. Time & frequency display, Auto or manual station search, 20 station memories. Large LCD display, tuning LED. Clock with radio or buzzer alarm and adjustable sleep timer. MW 9k/10k switch for overseas. Low battery icon. Requires 4 "AA" batteries or ext. 6V DC. 6 1/2" w x 4 3/4" h x 1 3/4" d, 15 oz. .... **\$89<sup>95</sup>**



### SR-77

(not pictured) Miniature AM/FM & FM Stereo Portable Receiver with Deep Bass Boost feature. Uses single "AAA" battery. Only 3" w x 1 1/2" h x 3/4" d. No speaker, Stereo earphones supplied. .... **\$34<sup>95</sup>**

### ATS-818CS (left)

#### World Band Receiver with Programmable Cassette Recorder

16 bands, continuous coverage 50kHz-30MHz. AM/SSB/CW/FM modes; stereo via headphones, 45 memory presets. Tuning methods: Direct input, auto or manual scan, memory recall, rotary dial. AM wide or narrow filter, tone & RF gain controls, signal strength & battery indicator. Programmable cassette recorder, play & record LED indicator, auto-stop feature. Clock with dual time display, alarm & sleep timer. Uses 7 "AA" batteries. Includes AC adapter & external antenna adapter. 11 1/2" w x 7 3/4" h x 2 3/4" d, 5 lbs. .... **\$229<sup>95</sup>**

### ATS-818 (right)

**World Band Receiver** • Has all of the features of the ATS-818CS above, but does not have the built-in cassette recorder feature. .... **\$179<sup>95</sup>**

### ATS-909

FM-Stereo/MW/LW/SW PLL Synthesized Receiver • 5 tuning methods: Direct Frequency, Autoscan, Manual, Memory Recall and Rotary, 307 memories. Stereo via earphones, SSB reception. MW 9k/10k switch. AM wide/narrow filter & FM mono/stereo selector. Dual time with 3 timers and sleep timer; clock displays 42 world city times. RF gain/tone controls. Lock switch, recorder output jacks, battery & signal strength indicator. Uses (4) "AA" batteries or 6V DC; AC adapter included. 8 1/2" w x 5 3/4" h x 1 3/4" d, 1.9 lbs. .... **\$279<sup>95</sup>**

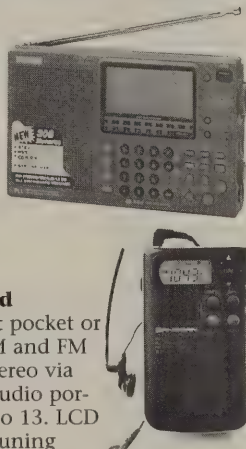
### ATS-606A

**Compact Digital All Band World Receiver (not pictured)** Continuous ALL BAND coverage 153kHz-30MHz. AM/FM (FM stereo with earphones). 54 memories, manual or keypad tuning, 1kHz/step fine tuning, scanning, LCD display, dual time clock & sleep timer. 5 1/2" w x 3 3/4" h x 1 1/4" d. .... **\$169<sup>95</sup>**

### DT-200V

#### Broadcast & TV Band

**Receiver** • Fits in shirt pocket or clips to belt. Covers AM and FM broadcast bands (FM stereo via headphone), plus the audio portion of TV channels 2 to 13. LCD display, up and down tuning buttons, auto-scan, 19 memories, automatic shut-off, built-in speaker. Belt clip and stereo earphones included. Uses (2) "AA" batteries. 4 3/8" h x 2 3/4" w x 3/4" d, 5 oz. .... **\$79<sup>95</sup>**



## GRUNDIG

### YACHT BOY 400

Covers 1.6 to 30MHz, all SW bands, FM broadcast band (stereo with earphones), AM and long wave broadcast bands. Direct keypad frequency entry or scan tuning with 40 memories. SSB reception with fine tuning control, high-low tone switch. Tilt stand, telescoping antenna. Multi-function backlit LCD display shows dual zone 24 hour time, frequency, band and signal strength. Dual selectivity. Automatic turn-on and sleep timer. Includes stereo earphones, external reel-up antenna for SW, and carrying pouch. Requires 6 "AA" batteries or external 9V DC. 4 1/2" h x 7 3/4" w x 1 1/4" d, 1 1/2 lb. .... **\$189<sup>95</sup>**

### YACHT BOY 305

Continuous shortwave coverage from 2.3 to 21.85MHz without gaps. Includes all existing shortwave bands plus FM broadcast (stereo with earphones), and medium wave. 30 memory presets. Direct entry digital tuning, auto-scan and up or down slewing. Large cavity speaker enclosure for true rich sound. Requires 2- "C" batteries or external 110V AC adapter. 4" h x 7 1/2" w x 1 1/2" d, >1 lb. .... **\$119<sup>95</sup>**



### TRAVELLER II

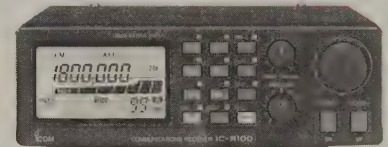
Covers AM & FM broadcast, the 19, 25, 31, 41, 49M SW bands (5.8-15.6MHz). Multi-function LCD display, pushbutton and slide controls, tuning indicator. Clock with travel alarm and World Time selection switch; select a city and read the time! Requires 3 "AA" batteries (not included). Telescoping and built-in ferrite antenna. 2" speaker, jacks for earphones & ext. AC adapter (not included) 5 1/2" w x 3 3/4" h x 1 1/4" d. .... **\$69<sup>95</sup>**

## ICOM



### R-8500 Super Wide Band All Mode Communications Receiver

Covers 0.1 to 2000 MHz (cellular blocked) in 10 Hz tuning steps. kHz to 30MHz, all modes. TV & Stereo FM is optional with TV-R7100. Dual VFOs and direct keyboard entry, thirty-two tunable multi-function memories. RIT, notch, selectable AGC, noise blanker, tone, squelch, recording jack. Selectivity: 500 Hz, 2.3 kHz, 6 kHz, 15 kHz. Optional wireless remote controller and voice synthesized readout board. 110/220V AC; Optional kit available for 12V DC. 11 1/2" w x 4 3/4" h x 10 3/4" d, 16 1/2 lbs. .... **SPECIAL \$1899<sup>95</sup>**



### R-100-11

#### Mobile Desktop Scanner

Covers 100kHz to 799MHz and 900-1856MHz (cell blocked). AM, FM wide and narrow modes; Direct Keypad entry or selectable step knob tuning. 7 scanning modes. 121 memories: 100 for frequency, mode, attenuator and preamplifier settings; 20 scan edge for ten pairs of ranges for programmed scan and one priority. Convenient 24-hour clock and timer. Telescoping antenna plus three external antenna inputs provided. DC cord and mobile mount included. 13.8VDC @ 1A. .... **\$799<sup>95</sup>**

### R-10-05

#### General Coverage Pocket Scanning Receiver

Covers 500kHz-1300MHz (cellular blocked). AM, SSB, FM wide or FM narrow modes. Programmable tuning steps. On-screen spectrum display, 1000 non-volatile memory channels arranged in 18 banks of 50 channels. Scan by bank, mode, or program. Alpha-numeric characters can be entered to identify channels & banks. Noise blanker and automatic noise limiter. Auto frequency control (AFC) & more! Easy-to-read edge-lit LCD display, 24-hour clock with timer, adjustable LCD contrast, signal indicator, power-saver function. Uses Ni-Cd, alkaline or other DC source. Ni-Cds & wall charger incl. 2.3" w x 5.1" h x 1.2" d. .... **SPECIAL \$499<sup>95</sup>**



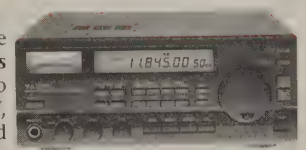
## YAESU

### FRG-100B

#### High Performance Communications Receiver

50kHz to 30MHz with CW, SSB, AM and optional FM modes.

50 fully-tunable memory channels store frequency, mode and filter selection; two additional memories provide band edge information used in scanning function. Multi-function scanning (memory, band selectable group, priority) with carrier or time-delay resume enables convenient searching for new stations, or scanning within a known band. Twin 12 and 24 hour programmable clocks with on/off-timer and sleep-timer. Yaesu CAT system for PC control. 9 3/4" w x 3 3/4" h x 9 1/2" d, 6.6 lbs. .... **\$619<sup>95</sup>**





# SHORTWAVE ACCESSORIES

## MFJ Model 784B

### Super DSP Filter

Digital Signal Processing automatically eliminates heterodynes, reduces noise & interference on SSB/CW/AM, all digital modes, VHF, EME & satellite. Tunable FIR linear phase filters minimize ringing, prevent data errors, and have up to 60dB attenuation just 75Hz away! Tunable Spotting Tone™ automatically tunes the CW filter even in the narrowest bandwidth. Exclusive Adaptive Tuning™ center frequency tuning automatically becomes finer as you narrow the bandwidth making extremely narrow filters easy-to-use. Improved automatic notch with variable aggressiveness. 2W audio amplifier with AGC. 12V DC or 110VAC with MFJ-1315. 2½" h x 9" w x 6" d..... **\$229<sup>95</sup>**



## 752C

### SSB/CW Audio Filter (left)

Pull out stations from noise & interference. Peak, notch, low or high pass control helps to eliminate heterodynes & interference. Filters tune 300 to 3000Hz; bandwidth varies from 40 Hz to almost flat; notches to 70dB. Effective noise limiter. Switchable inputs for two radios. Use 9 to 18VDC or 110VAC with MFJ-1312. 10" w x 2" h x 6" d..... **\$89<sup>95</sup>**



## 956

### LW/MW/SW Preselector/Tuner (right)

Improves the reception of signals from 150kHz to 30MHz. Tuning boosts signals while rejecting images, intermodulation, and other phantom signals. 2" h x 3" w x 4" d..... **\$39<sup>95</sup>**



## 959B

### Antenna Tuner & Preamplifier

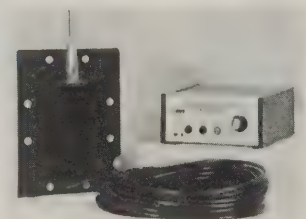
For 1.6 to 30MHz, provides a proper impedance match between antenna and receiver for best reception. Built-in 20dB preamplifier with gain control & 20dB attenuator. Select from two antenna inputs for two receivers. 9 to 8VDC or 110VAC with adapter. 5" w x 2" h x 6" d..... **\$99<sup>95</sup>**



## 1024 Outdoor

### Active Antenna

Covers 50kHz to 30MHz. The separate Amplifier Module with 54" whip mounts anywhere outside. Interconnection is made by the supplied 50' coaxial cable to the Control Unit, inside, which contains a Gain control & 20dB attenuator to prevent receiver overload from the amplifier. Switches select between two receivers and auxiliary antenna. LED "on" indicator. Auxiliary input and output jacks. 12VDC or 110VAC with MFJ-1312B. Control: 6" w x 2" h x 5" d, Module: 3" h x 4" w x 4" d..... **\$119<sup>95</sup>**



## 1020B

### Indoor Active Antenna

Covers 300kHz- 30MHz in five bands. Built-in 21 inch telescoping antenna provides maximum signal strength. Also functions as a preselector when using an external antenna. Minimizes intermodulation, improves selectivity & reduces noise. Tune, Band, Gain, On-Off/Bypass controls. Uses 9V battery, 9-18VDC or 110VAC with MFJ-1312. 5" w x 2" h x 6" d..... **\$69<sup>95</sup>**



## 462B

### Multi-Reader

Decode RTTY, ASCII, CW & AMTOR from Amateur, Commercial, Military, Weather, Aero & Marine. Plugs into phone jack; decodes & displays messages on a 16 character LCD display. 12VDC. 5½" w x 2½" h x 5½" d..... **\$159<sup>95</sup>**



See MFJ in the Price List for cables

## AMECO

### Tunable Preamplifier & Active Antenna



TPA, covers 2-30 MHz in 5 bands. Use with an outside antenna as a tunable preamplifier with >20dB gain and low noise figure, or as an effective indoor active antenna using the built-in 30" collapsible whip. Requires 9 VDC or 110VAC with optional PT-9T AC adapter. 2½" h x 8" w x 6½" d..... **\$76<sup>95</sup>**

## ANTENNA SUPERMARKET

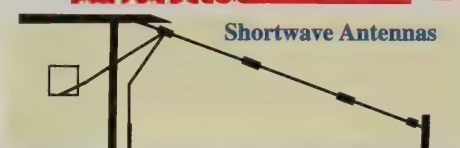


### EAVESDROPPER™ Shortwave Antennas

(left) Center-fed dipole with an 8-trap configuration, provides reception of all shortwave bands, 11 to 90M. Includes Zap-Trapper® gas-tube lightning arrestor & 50 ft. support rope. Overall length is 42 ft., comes assembled. When ordering, specify with 100 ft. of 72Ω twin lead, or weatherproofed coaxial center connector (coax not included)..... **\$79<sup>95</sup>**

(right) Coil loaded, end-fed SWL sloper configuration, with underslung parallel element. Covers AM broadcast, 120 and 90M, and all shortwave bands 7 to 13M. Overall 67 ft., comes fully assembled. Includes Zap-Trapper® lightning arrestor, coaxial connector & 50 ft. of nylon rope ... **CLOSEOUT \$59<sup>95</sup>**

## ALPHA DELTA COMMUNICATIONS, INC. AA

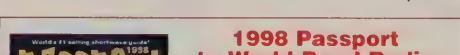


### Shortwave Antennas

**DX-SWL** • Shortwave Sloper Antenna, covers 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90 & 120 meter shortwave bands, plus the AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band transmit capability with an antenna tuner, handles up to 2000 watts. Overall length is 60 ft., requires 50Ω coaxial cable..... **\$79<sup>95</sup>**

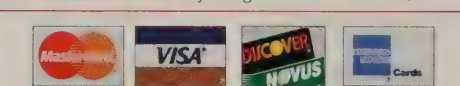


**DX-ULTRA** • Shortwave Dipole, covers AM Broadcast through 30MHz. Efficient, low-noise, broadband performance for Medium Wave, Tropical, International SW, Military, Government, Embassy, Maritime, Aircraft, Commercial & Utility frequencies. Designed with inductors, parallel wire elements and a center insulator with a built-in static electricity Protector. Length is 80 ft. - may be installed as a dipole, inverted-V, or full sloper. It can be used with an antenna tuner as a transmit antenna up to 2kW. Connector accepts coaxial cable or balanced line. Assembled..... **\$119<sup>95</sup>**



### 1998 Passport to World Band Radio

Shortwave listening guide containing data on every international broadcast station; names, locations, frequencies, operating times, coverage, target area, transmit power & more. Hourly guide for English language programs, worldwide. Test reports, buyer's guide • ARR 247 **\$19<sup>95</sup>**



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## ROSETTA laboratories



### Plug-in Receiver Card



### Screen Display

The WiNRADiO package contains a Receiver Card, Software, Handbook and an indoor antenna.

**Receiver** • A PC card that simply plugs into a slot in the motherboard of your IBM compatible computer to turn it into a sensitive wideband receiver with awesome features and powerful scanning options. The card contains the entire microprocessor controlled receiver with connectors for an antenna and an external speaker or headphones.

**Software** • The package contains a Windows program with impressive graphics of an actual receiver front panel with readout, labels and controls. Using the keyboard or mouse, WiNRADiO can be operated exactly like a professional radio receiver with features found on high quality equipment. Includes on-line help and a DOS command-line program.

**Handbook** • The handbook provides an introduction to WiNRADiO and radio scanning, with a start-up list of interesting stations to try including NASA space program frequencies. Also contains interfacing information needed by programmers to create their own WiNRADiO applications.

### Technical Specifications

**Receiver Type:** PLL-synthesized, triple conversion superhet.

**Frequency Range:** 500kHz to 1.3GHz (Cellular Blocked)

**Tuning Steps:** 1kHz to 1 MHz

**Modes:** AM, FM-W, FM-N, SSB

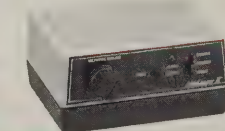
**Sensitivity:** 1uV (nominal)

**Audio output:** 200mW into 8Ω load

**\$499<sup>95</sup>**

### System Requirements

IBM PC compatible with 386 processor or higher • DOS 3.3 or higher, or Windows 3.1 or higher (including Windows 95) • 640kB RAM (4MB recommended for Windows users) • Vacant slot for 16-bit interface card • Speaker or headphones with standard 3.5mm stereo plug.



## BMI

### Nitellogger II

**Automatic Tape Recorder Activator** • Takes audio from any 8Ω source and provides 600Ω match and voice activated relay operation for a recorder. Three connections: the radio's external speaker jack, the recorder's remote & microphone input jacks. This device can make a simple crossband repeater by connecting up two HT's. Built-in monitor speaker with volume, drop-out sensitivity & delay controls, record light. AC adapter supplied..... **\$69<sup>95</sup>**

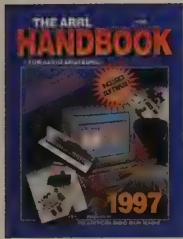
**RC-1A Impedance Matching Patch Cord** • Provides a proper impedance match between an 8Ω source and a 600Ω tape recorder input. Provides proper loading for the source device, an attenuator prevents recorder input overload. 3.5mm plugs..... **\$19<sup>95</sup>**

### Kenwood EZ-PASS No-Code Tech Study Guide

• Make a Personnel Connection provides a great method of learning about Amateur Radio. Available for both Windows 95 and DOS, the package provides test questions for both the Novice and Technician class FCC licenses. The Windows 95 version provides full graphics. The package uses the "Welcome to Amateur Radio" primer along with the most comprehensive full color Amateur Band Charts available. Included is a GOLD SEAL reward certificate redeemable to Kenwood for \$10.00 when you purchase a Kenwood radio as your first amateur rig. Specify WIN 95 or DOS ..... **\$34<sup>95</sup>**



# MOST POPULAR AMATEUR BOOKS



**1998 Radio Amateur's Handbook with software**  
1200 pages of basic and advanced radio theory. Plenty of how-to information and illustrations .... ARR 100 **\$32<sup>00</sup>**  
1997 edition is pictured.

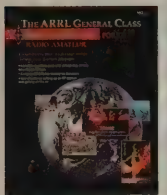
## Operating Manual

The best one-stop book of operating information that is available ..... ARR 240 **\$25<sup>00</sup>**



## Now You're Talking

This book has been used by 1000s of hams to study for the first license level exam. Updated July 1997 ..... ARR 236 **\$19<sup>00</sup>**



## General Class License Manual

All the study material you need to take the test. Good through 6/30/98 ..... ARR 170 **\$12<sup>00</sup>**

## Advanced Class License Manual

Everything you need to pass the test. Good through 6/30/99 ..... ARR 120 **\$12<sup>00</sup>**

## Extra Class License Manual

Complete source for test material. Good through 6/30/00 ..... ARR 156 **\$12<sup>00</sup>**



The Gordon West book series include test questions, answers, charts, diagrams & explanations of correct answers.

## No-code Plus

GWGM ..... **\$12<sup>95</sup>**

## General

GWGM ..... **\$9<sup>95</sup>**

## Advanced

GWAM ..... **\$11<sup>95</sup>**

## Extra Class

GWEM ..... **\$11<sup>95</sup>**



## McCoy on Antennas

Pull up a chair and learn from the master! Loaded with antenna projects for the novice through extra class CQXLEWMCCOY **\$15<sup>95</sup>**

## SEQUIA Pocket REF

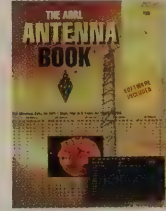
544 Pages! Chapters on air and gas, carpentry, chemistry, computers, electricity, math, hardware, plumbing, steel and materials surveying, welding, general info & more. 100's of tables & charts, 1000's of conversions. Everything that you need to know! ..... **\$9<sup>95</sup>**

## SEQUIA Pocket PCREF

Hard to find information on IBM PC's - ASCII Codes; Numeric Prefixes; Video Standards; Decimal/Hex Conversions; Printer Codes; PC Error Codes; I/O Pinouts; PC Memory Maps; Address Maps; Modem Commands & Switch Settings; Scan Codes; Floppy Drive Types; CPU Types; DOS History ..... **\$14<sup>95</sup>**

## FCC Rule Book

Complete guide to all FCC regulations pertaining to amateur radio ..... ARR 160 **\$12<sup>00</sup>**

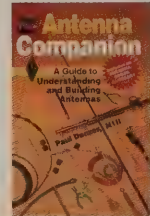


## Antenna Book w/IBM software

This one book covers all aspects of design, theory and construction. With software for design, propagation forecasting and much more ..... ARR 126 **\$30<sup>00</sup>**

## Antenna Compendium V with software

Baluns, HF beams, yagis and quads are just some of the subjects covered. Includes IBM software for plotting antenna model data files & more..ARR 139 **\$20<sup>00</sup>**



## Your Ham Antenna Companion

A guide to understanding and building antennas. Includes glossary of terms ..... ARR 357 **\$10<sup>00</sup>**

## W6SAI HF Antenna Handbook

Lots of inexpensive, practical projects that work. A great guide for construction of loop, yagi & verticals..... CQX W6SAIHFANT **\$19<sup>95</sup>**

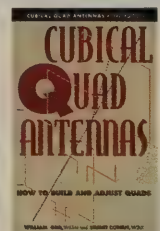


## All About Vertical Antennas

This book is the product of over sixty years of experimenting with vertical antennas and designs. Formulas, charts, graphs, more. RAC 087107 **\$13<sup>95</sup>**

## Simple Low Cost Wire Antennas

This book shows you how to build an efficient antenna at a minimum cost. RAC 87077 **\$13<sup>95</sup>**



## Cubical Quad Antennas

The story of the cubical quad, characteristics, how they work, construction, tuning and adjustment & more! RAC 087034 **\$13<sup>95</sup>**



## Hints and Kinks (vol 1)

Want to improve your station's performance or solve a problem? This is the book! ARR 185 **\$10<sup>00</sup>**

**Hints and Kinks (vol 2)** .....ARR 186 **\$12<sup>00</sup>**

## QRP Power

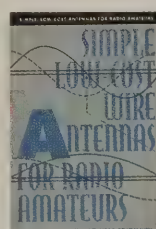
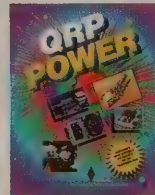
Learn about low power transverter design, transceivers, transmitters and more ..... ARR 256 **\$12<sup>00</sup>**

## Log Book

This universal log suits all amateur radio operations, DXing contests, rag-chewing..ARR 200 **\$4<sup>00</sup>**

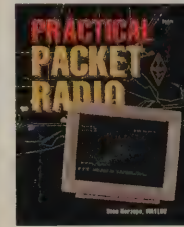
## Grid Locator Atlas

A must have for all contesters .....ARR 180 **\$5<sup>00</sup>**



## Your Packet Companion

A great first book for answering your packet questionsARR 358 **\$8<sup>00</sup>**



## Practical Packet Radio

Everything you need to know including setting up a station, getting on the DX packet cluster & more..... ARR 253 **\$15<sup>95</sup>**

## Kantronics G-TOR™ Book

A collection of previously-published articles, a detailed description of the G-TOR protocol & informational numerous charts. Written primary by Kantronics staff Phil Anderson, WØXI, & others..... **\$19<sup>95</sup>**



## Getting On Track With APRS

A hands-on guide to installing and using new map-based tracking systems ..... ARR 175 **\$14<sup>95</sup>**

## Satellite Experimenter's Handbook

A wealth of knowledge on amateur, weather, TV broadcast or other spacecraft..ARR 280 **\$20<sup>00</sup>**

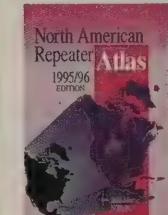


## Satellite Anthology, 4th Edition

A compilation of QST articles dealing w/satellites like Amsat-Oscars 10 & 13, Russian RS series & Microsats...ARR276 **\$12**

## Passport to Worldband Radio

1998 SW listening guide containing data on every international broadcast station; names, locations, frequencies, times, coverage, target area, transmit power & more. ARR 247 **\$19<sup>95</sup>**



## North American Repeater Atlas

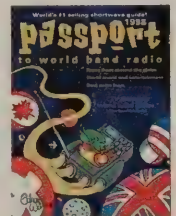
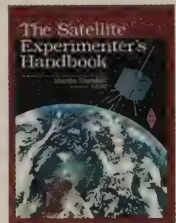
Repeater maps for all 50 states, Canadian provinces, Mexico, Central America and the Caribbean .....ARR225 **\$10**

## Repeater Directory

More than 20,000 listings for voice and digital repeaters and propagation beacons located in North, Central and South America. Lists more than 500 beacons from 14 to 24 GHz, band plans, tone chart, committees, clubs & more! .....ARR270 **\$8<sup>00</sup>**

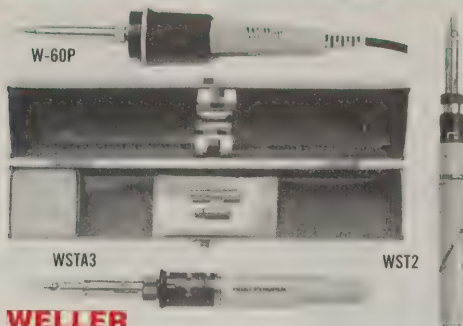
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List under: ARRL • ARTSCI • CQ Cambridge Grove • Monitor America Polyphaser • Radio Amateur Callbook • W5YI





# SOLDERING • ENCODERS & DECODERS



## WELLER

**W-60P** 60-W Pencil-type Soldering Iron For most circuit work. Supplied with 1/16" 700°F screw-driver tip. 7 7/8" long, 2 1/2 oz., 6 ft. cord, 120V **\$59<sup>95</sup>**

**WP-25** 25W Pencil-type Soldering Iron For work on delicate electronic circuits. 750°F tip temperature. 7 7/8" long, 1 1/4 oz., 4 ft. cord, 120V AC... **\$31<sup>95</sup>**

**WSTA3** Pyroprop® Butane Soldering Iron Lightweight and completely portable. Operates for up to three hours on a charge of regular cigarette lighter butane. Soldering temperature control is adjustable from 392° to 932°F, with a very fast heat-up time. It's ready to solder in just 30-seconds! Supplied with tips for soldering, hot air (1202°F), and brazing ..... **\$89<sup>95</sup>**

**WST2** Pyroprop® Jr. A portable mini butane powered soldering iron. Recharges in seconds from a regular cigarette lighter butane container. Soldering temperature is adjustable from 392° to 842°F. Also, hot blow feature (806°F) and torch feature (2372°F). Has handy pocket clip ..... **\$69<sup>95</sup>**

**7200PK** Soldering Gun Compact, lightweight, 75 watts. Handles connectors and almost any other heavier soldering job. The flat, self-supporting back acts as a convenient rest when not in use. Carrying case, extra tip and solder. 120V AC..... **\$26<sup>95</sup>**

**WTCPT** Controlled Output Soldering Station This pencil iron is safe for soldering ICs. Power unit with unitized on-off rocker switch with indicator light. Storage tray holds extra tip and tip cleaning sponge ..... **\$109<sup>95</sup>**

**EC-1002-1** Soldering Station Compact! Soldering pencil stand connects to right or left side of unit. Variable temperature, indicator light, self feeding reservoir. Handy tray stores extra temperature sensing tips ..... **\$199<sup>95</sup>**

## WAHL

**7740** Cordless Soldering Iron

Provides tip performance up to 50 watts and over 700! Contains a premium nicad battery for high-rate charging; a partially discharged unit will return to full capacity within 1 to 2 hours, with a complete recharge in 3 to 4 1/2 hours. Replaceable battery and worklight. Comes with recharging stand, fine and heavy tips ..... **\$45<sup>95</sup>**



## Communications Specialists TONE ENCODERS & DECODERS

**SS-32P** Programmable CTCSS Encoder On board DIP switch programs 32 EIA tones from 67 to 203.5 Hz. Micro, fits inside most transceivers. 0.9" x 1.3" x 0.4", 6-30 VDC.... **\$28<sup>95</sup>**

**SS-32SMP** Programmable CTCSS Encoder Super small for easy installation in most HTs. Standard with 32 EIA tones between 67 and 203.5 Hz. Individual tones are selectable by soldering binary coded jumpers. 0.53" x 1.0" x 0.16", requires 6-15 VDC ..... **\$27<sup>95</sup>**

**TS-32P** Field programmable CTCSS Encoder-Decoder DIP switch programmable for 32 EIA tones from 67 to 203.5 Hz. 1 1/4" x 2", 0.4", 6-25 VDC **\$57<sup>95</sup>**

**DTD-1** DTMF Decoder Small, high quality and low cost. Decodes any one of 5,040 4-digit codes to provide a latched or momentary open collector output for single function operations. 1 1/4" x 2" x 0.4", requires 6-12 VDC..... **\$49<sup>95</sup>**

**TE-32** Multi-tone Encoder Provides direct access from a front dial rotary switch to all EIA CTCSS tones from 67.0 to 203.5Hz, allowing users to access various repeaters Great for mobile or test bench. 5 1/4" x 3.3" x 1.7", 6-30 VDC .... **\$49<sup>95</sup>**

**TE-64** Multi-purpose Encoder Provides 64 tone frequencies. Includes 32 sub-audible, 19 burst-tone, 8 Touch-Tone® and 5 different test frequencies. Separate outputs for high & low frequency ranges. 5 1/4" x 3.3" x 1.7", 6-30 VDC..... **\$79<sup>95</sup>**

**ID-8** Multi-Featured Automatic Morse ID'er Programmable via 12-button keypad. Eight changeable messages, 200 characters total. CW speed: 1-99 wpm; ID interval timing: 1-99 minutes; ID hold-off timing: 0 to 99 seconds; CW tone: 100-3000Hz. Board: 1.85" x 1.12" x 0.35" ..... **\$69<sup>95</sup>**



## NORCOMM™ TONE SIGNALLING

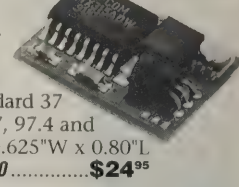
### NC-101 ENCODER

Micro-miniature CTCSS Encoder, field tunable to any of the CTCSS tone frequencies between 67Hz to 254 Hz. 5 to 15VDC. 0.60"W x 0.80L x 0.15H *NorFax™ #5040*.... **\$19<sup>95</sup>**



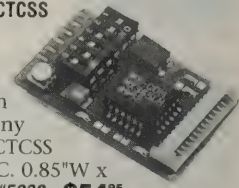
### NC-104 PROGRAMMABLE ENCODER

Sub-miniature, field programmable CTCSS Encoder unit for limited space. Provides the standard 37 EIA CTCSS tones + 69.37, 97.4 and 205.5 Hz. 7 to 24VDC. 0.625"W x 0.80"L x 0.170"D *NorFax™ #5150* ..... **\$24<sup>95</sup>**



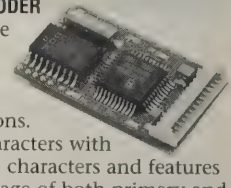
### NC-106 PROGRAMMABLE CTCSS ENCODER/DECODER

A sub-miniature crystal-controlled digital unit. Field programmable with dip switches providing any one of the standard 37 CTCSS tones + 97.4Hz. 6-24VDC. 0.85"W x 1.35"L x 0.28"H *NorFax™ #5230*... **\$54<sup>95</sup>**



### NC-401 TOUCH-TONE® DECODER

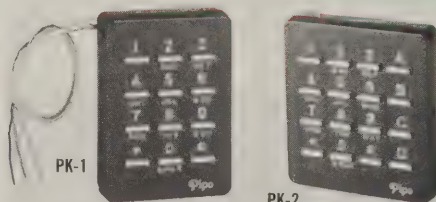
A unique micro-miniature unit combining two distinct multi-addressable decoders for control of remote or local applications. Decodes all 16 DTMF characters with an address length of 1-14 characters and features EPROM memory for storage of both primary and secondary codes, input/output functions, dead-beat disable and user outputs, plus default reset. Programming easily performed by means of a conventional DTMF encoder. 6-24V DC. 0.80"W x 1.37"L x 0.23"H. *NorFax™ #5545*..... **\$59<sup>95</sup>**



## More Information on NorComm products?

Call the NorFax™ automated fax retrieval system - 916-477-8403 • 24 Hours a day!

## PIPO Communications HIGH QUALITY DTMF ENCODERS



- 12-digit or 16 digit pads
- Steel Keys
- Sealed Gold Dome Contacts
- Self-contained
- NO RFI
- Simple 3-wire connection

**PK-1**  
2.65"h x 2"w x .045"

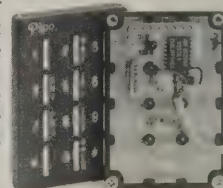
- Voltage 8.5 to 16V DC
- Temperature -22 to +160 F
- Adjustable level and timing
- Front panel adjustable
- Includes template, hardware and schematic

**PK-2**  
2.65"h x 2.5"w x 0.045"

**K-Series option:** features a built-in keying circuit & relay to automatically key a transmitter or other system. When any key is depressed, a relay closes for 0-3 seconds, time is adjustable with a trimpot.

**M-Series option:** a special encoder package for mounting any PK-1/1K, PK-2/2K PIPO encoder to surfaces that are inaccessible from the rear such as walls, mobile dashboards, panels, etc. Consists of a frame which secures to the mounting surface with the encoder press-fitting into the frame.

**P-7V** Features similar to the K-Series but rugged-design for the demanding Land Mobile Industry. The choice for radios or systems exposed to harsh or abusive environments. Features miniature electronic design, low distortion, adjustable audio output 12-key, vertical. format. 2.16"h x 1.50"w x 0.20"d. **CLOSEOUT**



See PIPO in the Price List

Toll Free:

**1-800-558-0411**

e-mail: [help@aesham.com](mailto:help@aesham.com)

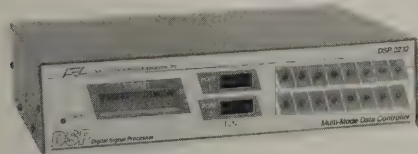
Internet: [www.aesham.com](http://www.aesham.com)





**PK-12** (right)  
Low cost, 1200 bps, VHF/UHF, packet TNC  
Ideal unit for getting started in Digital Communications. 1200 bps, VHF Packet ready; Gateway as a Node; PC PakRatt Lite™ Control software included; APRS™ software included; APRS Adapter Cable available; AEA Host mode; Advanced command set; Identify TCP/IP, TheNet & NetRom; GPS firmware & commands; Stand alone tracking; External TX adjustment. Perfect for base station and full of features for mobile. Energy efficient - 12V DC, or can operate on a 9V battery. 5 1/4" w x 5 1/4" d x 1 1/4" h, 12 oz ..... **\$99<sup>95</sup>**

**PK-96** (left)  
9600/1200 bps packet TNC  
A plug-in and go TNC, loaded with features. 9600/1200 bps Packet Ready; GPS firmware standard; Remotely programmable GPS commands; Stand Alone Tracking; Hardware HDLC for accuracy; True DCD to hear weak signals; Gateway as a Node; TheNet X-1J Node firmware option available; Full MailDrop facility; PC PakRatt Lite™ terminal control software & APRS™ software included; AEA Host mode; Advanced command set; Identify TCP/IP, TheNet & NetRom; Separate external TX for 9600/1200 bps adjustments; External reset. Windows™ and Macintosh™ program available. Requires 12V DC. 6 1/2" w x 7 1/2" d x 1 1/4" h, 1 1/4 lbs. Available with 32K RAM (18K Mailbox)..... **\$169<sup>95</sup>** or 128K RAM (100K) ..... **\$199<sup>95</sup>**



**DSP-2232** Multi-mode Data Controller • With Gateway and Pactor Simultaneous dual port HF/VHF operation. All amateur PSK satellite modems: PACSAT, OSCAR 13 and UO-22. Up/down Doppler shift for PSK modems and outputs for up/down frequency stepping to control frequency. Compatible with G3RUH/K9NG 9600 baud modems. LCD channel mode and status. 11 1/4" w x 9 3/4" d x 2 1/4" h, 4 lbs ..... **\$499<sup>95</sup>**

**IDR-96 - CLOSEOUT**  
Integrated 440MHz, 9600 bps Data Radio PK-96 TNC technology and a 5W, crystal controlled radio operating on 441.05MHz. Simple operation, no tuning! Full featured mailbox; Gateway node operation; advanced GPS; Identification of TCP/IP, TheNet; and NetROM stations; and more! PC PakRatt Lite™ & APRS™ software. 12VDC. **\$399<sup>95</sup>**

**DM-1** Deviation Meter  
Measure FM transmitter deviation on 144, 220, or 440MHz. Battery powered, crystal controlled, no tuning. Two ranges allow accurate measurement of voice, data, DTMF, and sub-audible deviation on a 10-segment LED bar display. Includes outputs for an external digital or analog meter, and audio. 6 1/2" x 4 3/4" d x 1 3/4" h, 1 lb... **\$169<sup>95</sup>**  
<http://www.timewave.com>

**PCB-88** A full-featured, 1200 bbs, IBM compatible, HF/VHF packet controller computer board. Plug it into any 8 or 16-bit expansion slot in your XT, AT or compatible PC. **CLOSEOUT \$99<sup>95</sup>**



## P38 MULTIMODE HF MODEM

A full-size 13 1/2" DSP card for all AT compatible PC's. Provides the best all-around performance on CLOVER, PACTOR, AMTOR and RTTY. Does not require the use of Comm ports or IRQ's. Operating software for your PC is included. Latest updates are available through the HAL Techline and the Internet. Third party software, such as EXPRESS, RAGCHEW, WF1B is available. One-year warranty..... **\$349<sup>95</sup>**

More Information...

**HAL TECHLINE:** 217-367-5547  
[www.halcomm.com](http://www.halcomm.com)



## Kantronics



### Packet Controllers Amateur Paging Multi-Mode Controllers

See the Price List & P. 40

#### Kantronics G-TOR™ BOOK

The New Mode A valuable collection of previously-published articles, a detailed description of the G-TOR protocol and numerous informational numerous charts. Written primary by the Kantronics staff of Phil Anderson, WØXI, Karl Medcalf, WK5M & others. 90 pages ..... **\$19<sup>95</sup>**

[www.kantronics.com](http://www.kantronics.com)



## MFJ Packet



### 1278B

**Multi-mode Data Controller** 10 modes: PACTOR, 16-level FAX, Color, SSTV, PACKET, AMTOR, RTTY, ASCII, CW Navtex & Memory Keyer. Enhanced Mailbox, 32K RAM, 16-gray level modem, 20 LED tune indicator, Auto Signal Analysis, MARS mode, sidetone amplifier, internal modem header, 10 user programmable message buffers, packet connect bell, dual radio ports, "Has Mail" LED, KISS interface, Host mode, Threshold control, RS-232 and TTL ports. 12 VDC, AC adapter 9 1/2" x 9 1/2" x 1 1/2" ... **\$269<sup>95</sup>**

**780** DSP Board ..... **\$89<sup>95</sup>**

**1278BT** Same as MFJ-1278B except Turbo version, includes a 2400 baud modem ..... **\$299<sup>95</sup>**

**1278B/DSP** MFJ-1278B w/DSP filter ..... **\$349<sup>95</sup>**

### 1272B/M TNC/MIC

Switch. Just push button for voice or digital. Specify radio and TNC connection. **\$39<sup>95</sup>**



### 8621

**2 meter Packet-only Data Radio**

High-performance through 9600 baud. Plug in the TNC cable\*, your antenna and power - you're ready for packet. Crystal controlled on 145.01 MHz 5W output, requires 12 VDC @ 1 Amp. 5" w x 5 1/2" d x 1 1/2" h... **\$109<sup>95</sup>**

### 8631

**220MHz Packet-only Data Radio**

Same a functions as MFJ- 8621, but 223.700MHz and 3W output. **\$129<sup>95</sup>**

### 8621X1

**Dedicated VHF Data Radio for APRS**

Automatic Packet Reporting System transceiver (145.79 MHz)..... **\$129<sup>95</sup>**

### 1270C

**TAPR TNC-2 Clone** Interfaces computer with RS-232 serial port and terminal program for VHF/UHF, OSCAR and other non-FM packet. Switchable HF/VHF modems. EasyMail™ personal mailbox, WeFAX. KISS interface for TCP/IP, 256K EPROM & 32K RAM. TTL serial port, battery back-up. AX.25/Level 2-V2 software, hdwe HDLC-full duplex, true data carrier detect for HF, multiple connects. interface cable, serial port connector & AC adapter. 12 VDC. 9 1/2" x 7 1/2" x 1 1/2" ..... **\$109<sup>95</sup>**

### 1270CQ

**TAPR TNC-2 Clone** 9600 baud TNC..... **\$209<sup>95</sup>**

### 2400

**2400 bps packet modem** for MFJ TNCs..... **\$29<sup>95</sup>**

### 9600B

**9600 bps packet modem** for MFJ TNCs..... **\$99<sup>95</sup>**

### 781

**DSP for all TNCs!**

Separate unit gives your TNC (Kantronics, etc) Digital Signal Processing power ..... **\$119<sup>95</sup>**



See Price list for pre-wired 8621-to-TNC cables.  
Crystals for other packet channels may be ordered from MFJ by calling 1-800-647-1800.

## PacComm Packet Radio Systems, Inc

### Pico Packet Miniature TNC

Very small, 128K RAM. A second serial port for external GPS may be added. Terminal programs included. Available with internal GRPS receiver. Optional Ni-cad battery packs. This would make a good portable or automatic unattended tracking TNC because it can be independent of power sources. With 128K RAM ..... **\$149<sup>95</sup>**

### Tiny-2MK-2 Multi-purpose TNC

Basic TNC. TNC-2 compatible. Disconnect header (will accept any TNC compatible modem, MFJ-9600, etc). RS-232 and TTL ports. Low power consumption, draws only 45ma ..... **\$149<sup>95</sup>**

### Tiny-2MK-2/GPS Tracker

Basically a Tiny-2 with a built-in GPS unit. Supplied with a small mag-mount Trimble GPS antenna..... **\$499<sup>95</sup>**

### Spirit-2 High Performance Packet Controller

Designed to be configurable by setting jumpers and installing optional logic devices to support various tasks without performance compromise ... **\$239<sup>95</sup>**





## Digital Power.....New Packet Units!

**P**ACKET: The KPC-3 Plus and KPC-9612 Plus, new for 1997, replace the "industry standard" KPC-3 & KPC-9612. These newly designed units retain the features of their predecessors and add new modes, firmware, and hardware: both include a Motorola HC11 processor, digital pots for keyboard adjustable radio drive, two A/D inputs for data gathering, two control line outputs, and a substantially expanded manual - including 40 + pages of "operational" information on packet, personal mailboxes, the national BBS system, GPS interfacing, WEFAX reception, and more. Both add copy capability for the Emergency Manager's Weather Information Network (EMWIN) - a 24 hour VHF broadcast of weather information (supported by FEMA and the NWS) - and expanded APRS operations (advanced digipeater and telemetry beacon).

As with most Kantronics TNCs, the KPC-3 Plus and KPC-9612 Plus support these "standard" modes of operation: "new user," terminal, HOST, GPS, BBS, KISS, extended KISS, and KA-Node. K-Net networking eproms are optional. The KPC-3 Plus has a 1200 baud radio port, and the KPC-9612 Plus features a 1200 radio port and a high speed port (4,800, 9,600, 19K2, and 38K4 baud; software selectable). The higher speeds are included in anticipation of the availability of higher speed radios in the near future for 440 MHz - six 100 Khz channels are set aside for packet near 430.55MHz. The 9612 Plus also supports **amateur paging** - via port 2.

**H**F DIGITAL: The KAM Plus just got a make-over. It now features a clam-shell metal case and front cover, with colors matching the KPC-3 Plus and KPC-9612 Plus TNC modems. All popular HF digital modes are supported (version 8.2 firmware): AMTOR, Pactor, G-TOR, RTTY, CW, GPS (NEMA-0183 interfacing), and packet. Port 2 supports 1200 baud packet and may be operation at the same time an HF mode is running in port 1, providing true dual-port operation - a unique feature of the KAM Plus. This HF workhorse is supported by HostMaster II+ (DOS based software) and many third-party programs.

**rfconcepts** a division of Kantronics Co., Inc.

**V**HF/UHF AMPS: The 150 watt 2-meter Max-Amps, new for 1997, compliment Kantronics' Rf concepts line of VHF and UHF amplifiers: the Mini-Amp 144P, the Mini-Amp-440P, and the dual-bander, the RFC 2/70G. The Max-Amp 10 (10 watts in for 150 watts out) and the Max-Amp 45 (45 in for 150 out) replace the RFC 2-217 and RFC 2-317 respectively. These new designs feature directional coupler keying, thermal & SWR protection, a new heat sink, and 15 dB gain receive preamps.

### The Leader in:

- Packet Controllers
- Amateur Paging
- Multi-Mode Controllers
- RF Amplifiers

## Kantronics

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web: www.kantronics.com



**New! KPC-3 Plus/128**



**New! KPC-9612 Plus/128**



**KAM Plus**



**New! Max-Amp 45**

*More Amplifiers - See the Price List*



# NOISE KILLER

# TIMEWAVE TECHNOLOGY INC.

# DSP FILTERS

## All-Mode DSP Noise Filter



**Timewave DSP-599zx and DSP-59Y are used with more DSP Transceivers than any other DSP filter.** (See customer comments at Timewave web site.

Review in QST Magazine December 1996, World Radio and TV Handbook 1997 (DSP-599ZX vs. NIR-12), Radio Communications February 1997 (Australia), Radio-Horen March 1997 (Germany) see the Timewave web site for more listings. [www.timewave.com](http://www.timewave.com)

### "The most powerful Noise and QRM filter in Amateur Radio"

**DSP-599zx** – the latest generation DSP filter, incorporating a High-speed CPU running at 36.8 Million Instructions per second. A backlit, 2 x 16 alpha display is used for Visible Memories™ feature to eliminate guessing which filter settings are selected, and provides instant recall of all filters.

The filter comes with preset filters for data and includes 5 for RTTY, SITOR, AMTOR, PACTOR, G-TOR, HF Packet, Weather Fax, Slow Scan TV, Clover and 3 User Definable filters. Timewave filters process in Real Time, a feature that reduces listener stress during noisy band conditions. And, you can leave the random noise reduction feature ON when tuning in a station because the time delay is not noticeable like other filters.

A special RS-232 port allows the filter to be used as a RTTY Modem with software and a computer. In this mode, the filter has a tuning bar and a special Double Notch Filter that gives the RTTY user a 5-7 dB Signal to Noise Ratio improvement over a regular DSP filter, heterodynes that disappear faster and weak signals that "pop up" from the noise.

The Continuous Tuning Filter can open up to 5kHz for Shortwave AM broadcast & VHF/UHF FM. In Voice Mode, the Heterodyne Eliminator has a user-selectable Automatic Notch, a Manual Dual Notch and a Manual Single Notch. The Low Pass Filter covers 200 to 1000 Hz and the High Pass Filter from 1000 to 5000 Hz. Each individual filter is tunable

- Visible Memory™ • Calibrated Filters™
- Instant Recall • Hyperspeed 27ns, 36.8 MIPS
- Wide Filtering for Shortwave & VHF/UHF FM
- Narrow for CW/SSB • Demodulates RTTY
- Up 20dB White Noise Reduction
- Front Panel Programming
- Two selectable radio inputs
- Programmable Input sensitivity & Line output
- Selectable Memory Mode on power up
- Real Time Listening • AGC

and does not have any interaction with the other.

In CW mode, the filter has Variable Center Frequencies to match any radio and is the only one to incorporate CW Pitch Shift Conversion. This allows the operator to take a high sidetone and convert it to any tone between 200 & 800Hz. Many older transmitters and transceivers have sidetones which can not be changed or reprogrammed. Their high sidetones can be converted to a low tone and still let the operator zero beat another signal without changing the BFO or other controls.

A Test Equipment Mode features a Two-tone Generator for SSB; 20Hz to 10kHz Audio Sine Generator; Audio Millivolt Meter and a CTCSS Encoder & Decoder for all PL Tones from 67.0 to 254.1 Hz. It's accurate enough for maintaining radio equipment and for use at repeater sites to check tones, etc. In addition, a CTCSS squelch feature allows keying a tape recorder or other device.

Timewave is the only manufacturer of Amateur Radio DSP noise filters to use the more expensive 16 bit A/D D/A converter with a high audio bandwidth. This makes the filter quieter than the competition and gives much superior audio reproduction. Also incorporated is the latest surface mount technology using a four layer board to improve quietness and reliability. Meets both the FCC Class-B and strict European Common Market standards. 12V DC @ 1A 7½" w x 8" d x 1½" h, 2.2 lbs .....\$399<sup>95</sup>

- Variable Noise Aggressiveness
- Dual Audio Channels • Headphone level
- CW Marker Tone for zero beat
- Backlit LCD Display
- Extra code space on 2 Mb EEPROM
- Field Upgradable Software
- Test Equipment Mode
- Audio Voltmeter, Generator & CTCSS
- Variable Notch Aggressiveness
- Variable Line Noise Filter (AM mode only)



**DSP-59 Plus Version 3.0** Features 225 combinations of High & Lowpass Filters for Voice and all Special Modes. Over 300 CW & DATA filters (25 to 600Hz), allow selection of almost any filter needed for all modes, including RTTY, SSTV, AMTOR, G-TOR®, PACTOR, Packet, Satellite, EME, SSB, CW, Weather Fax & AM Remodulator for RTTY for perfect copy of signals

below the noise. Voice Filters from 200 Hz (high-pass). 13 CW center frequencies from 400 to 1.0 kHz. AGC, HP/LP/BP, Heterodyne Elimination & Random Noise Reduction. 50 dB Notch kills heterodynes. Dramatic Random Noise Reduction from static, lightning, white noise, line noise, etc.

Marker spots the narrow CW filter, audio generator & self-test mode. Audio bypasses directly to station speaker with pushbutton or when power is off. Meets both the FCC Class-B and strict European Common Market standards. 12VDC @ 1A. 7½" w x 8" d x 1½" h, 2.2 lbs .....\$269<sup>95</sup>

**AEA AC-4** Power Supply for TW DSP filters..\$19<sup>95</sup>

## All-Mode DSP Noise Filter for YAESU



**\$25<sup>00</sup>**  
**Factory Rebate**  
thru Dec 31<sup>st</sup> 1997

Reviewed in QST Sept 1997

**DSP-59Y Plug in Module** Fits in the phone patch slot of a YAESU® SP-5 or SP-6 external speaker. It uses the existing A/B switch and phone jack and retains use of the analog filters.

The module gives the YAESU FT-1000, FT-1000D, FT-990, FT-890, FT-900 & FRG-100 the latest Noise Reduction and DSP filtering technology. It can also be used with other radios and transceivers.

The DSP-59Y has many of the features of the DSP-599zx described to the left. It's Field Upgradable, has an LCD display for Visible Memories™ and Calibrated Filters™. The CW Filters range from 10 to 600 Hz with CW Pitch Shift and the Voice Filter ranges up to 5 kHz wide for SSB, FM & AM.

It features the new Hyper-Speed DSP Processor operating at 36.8 MIPS (the fastest) with 80KB of RAM on the CPU. A/B switch for Selectable Input Channels and the Analog Filters that are already part of the YAESU® speaker. This gives the operator maximum flexibility of both sets of filters and they can be used at the same time.

It also has Automatic & Manual Notch Filters. The manual notch can be used in the CW mode. Variable Noise Aggressiveness. Meets both the FCC Class-B and European Common Market standards. 12VDC @ 1A. 12" d x 3½" h x 2¼" w, 2 lbs.....\$389<sup>95</sup>

- Easy installation inside SP-5/6 speakers
- Increases Equipment Value & Performance
- Hyperspeed DSP (27ns)
- 36.8 Million Instructions per Second
- 80 Kb RAM on DSP Chip • 2 Mb EEPROM
- LCD Alphanumeric Display
- Visible Memories™ - instant recall
- Software controlled front panel
- Preset Voice, DATA and CW filters
- Programmable filters • Demodulates RTTY
- RTTY Wideband for AM and FM
- Shortwave listening to 5kHz
- Programmable line output level
- Field Upgradable software
- Extra Code Space for adding new software

## Timewave is the leader in Amateur Radio DSP technology!

*Timewave Advanced DSP Filters allow an economical upgrade of your existing radios to new Higher Performance standards.*

*Timewave was the first to simultaneously Reduce Random Noise, Eliminate Heterodynes and provide Razor Sharp Audio filters. TW precision DSP filters are a must for today's poor signal conditions and crowded bands.*

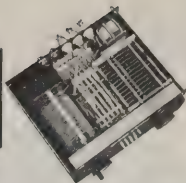
*Timewave's technology leading filters are preferred by DX'ers & Contesters world wide.*

information, inquiries & customer service:

E-Mail: [dsp@timewave.com](mailto:dsp@timewave.com)  
[www: www.timewave.com](http://www.timewave.com)



## NYE VIKING



**MB-V-A** 1.8-30MHz continuous tuning. Heavy duty silver plated variable inductor with 25:1 vernier dial. 7KV variable capacitor and 15kV switch selected fixed output capacitors. Tunes most antennas 1/4-wave length or longer from 40-2000Ω but some antennas may not tune at 1.8 MHz. Automatic SWR metering without reset or calibration. Separate automatically switched 300W/3KW RMS wattmeter. Precision 2 1/2" backlit meters display SWR and Power, continuously. Rugged, silver plated 5-position pushbutton antenna switch selects 4 antennas: 2 coaxial, single wire and balanced line, and bypass. Trifilar-wound 3KW toroid balun provides balanced output from 200 to 1000Ω, and unbalanced output down to 20Ω. Requires 9V battery for meter and external 12VDC for meter lights. 14 1/2"wx6 3/4"hx12 1/4"d, 18 lbs **\$879<sup>95</sup>**

**MB-V-B** same specifications as MB-V-A, except no Power or SWR metering capability ..... **\$760<sup>95</sup>**

### NYE Low Pass Filter

Installs between transmitter output and antenna. Eliminates Television Interference caused by harmonics from 1.8-30MHz transmitters. Rated at 2KW, 5KW SSB peak. Flat, low loss passband and stopband for over 65dB attenuation above 57MHz. SO-239 connectors, both ends.....**020-001 \$56<sup>95</sup>**



**10DA-L** (left) High-Z dynamic SSB microphone. Controlled 300-3000 Hz response provides high attenuation of the unwanted sideband & better copy through interference. 2 1/2"wx 2 1/2"hx 3 3/4"d, 17 oz. Black, uses T-UG9 stand..... **\$69<sup>95</sup>**

**D-104L** (center) The original "super talk power" microphone, a favorite of hams for decades! High output and 300-7500Hz response with rising characteristics between 500 and 4000 Hz, provides maximum intelligibility. Shock proof cartridge with high impedance crystal element, metal sealed for protection. Solid machined brass parts, heavy mesh grille, all heavy chrome plated. 3" dia. x 1 1/4"d, 14 oz. Requires T-UG9 stand ... **\$42<sup>95</sup>**

**T-UG9** (right) Accepts the D-104-L or 10DA-L microphone heads. Built-in adjustable preamplifier with an output impedance that matches most transmitters. Side switch bar for PTT with slide-up clamp for locking down. Height is 8 1/2" without head, base is 5 1/2"dia. Chrome neck, grey base, 6-wire coiled cable. Requires 9V battery ..... **\$52<sup>95</sup>**

## SHURE



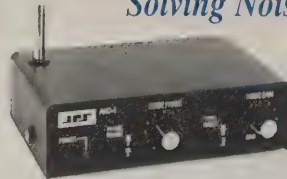
Series II  
SUPER PUNCH®

**526T** A dynamic microphone with a built-in solid-state pre-amplifier and adjustable volume control. Works into 500 to 5000Ω inputs, allowing it to replace most ceramic or dynamic original equipment microphones. The tailored 200 to 6000Hz frequency response provides very effective audio. Convenient momentary or locking push-to-talk bar operation. Comes with a coiled 5-conductor cord and wiring guide. Requires connector and 9V battery. 2 lbs, 11 oz. **\$119<sup>95</sup>**



JPS Communications, Inc.

## Solving Noise Problems with Digital Signal Processing!

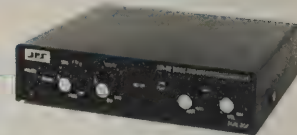


Antenna Noise Canceller

**ANC-4** Installs between the antenna and receiver. Usable between 100 kHz and 80 MHz. Eliminates local POWER LINE noise before it enters the receiver to let you hear signals you didn't know were there. Two front panel adjustments, PHASE and GAIN, reduces locally-generated noise typically by 50 dB. Short whip and wire noise pick-up antennas supplied with each unit. Rear panel connector for external noise probe. Automatic transmit switch over, handles up to 250 watts, has internally selectable delay time. Europe CE certified. 12V DC @ 300 mA. 1 3/4"hx 6"wx 4 3/4"d, 2 lbs ..... **\$189<sup>95</sup>**

**PowerPack** 115V AC adapter for JPS units. **\$16<sup>95</sup>**

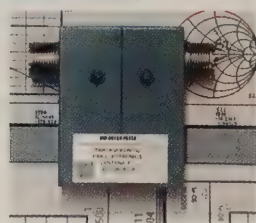
### Noise/Interference Reducer & Filter Unit



**NIR-12** Features two 40 MHz DSPs to provide the most powerful and advanced DSP Noise Reduction Unit available. Unparalleled performance, super-selective FIR filters, fully adjustable filter center frequency and bandwidth (3400 Hz to 50 Hz); both Dynamic Peaking AND Spectral Subtraction Noise Reduction; spectral multi-tone NOTCH filter. All modes and functions may be used simultaneously. Use on all operating modes, including AMTOR & PACTOR. Installs between the receiver audio output and external speaker. Europe CE certified. 12V DC @ 1A. 1 1/4"hx 6 1/2"wx 7 3/4"d, 4 lbs ..... **\$349<sup>95</sup>**

**SDK-12** Software Development Kit. The interface module and software to allow programming of the NIR-12 DSP chips via the serial data bus on your personal computer ..... **\$35<sup>95</sup>**

## PAR ELECTRONICS Notch Filters



Solve most intermod or front end overload problems from paging systems with these small, asymmetrical, 45 to 54dB Notch Filters. The design is centered on the offending pager spectrum of 152 to 153 MHz and works effectively with an Insertion loss of typically 0.5 dB or less and a V.S.W.R. of 1.25:1. Works well with dual-band (2m/70cm) transceivers providing low-loss pass-thru of 70cm signals.

**VHFDN152** 2m base or mobile intermod filter, SO-239 connectors, 50W. 2" x 1" x 2 1/2" ..... **\$62<sup>95</sup>**

**VHFDN152HT** 2m Intermod filter for handhelds BNC connectors, 20W. 1 1/2" x 3/4" x 2" ..... **\$68<sup>95</sup>**

**UHFDN450** UHF Intermod filter for base or mobile. Blocks pagers/two way transmitters that cause 70cm intermod; transparent to 2M .... **\$62<sup>95</sup>**

**UHF-12** 12" Belden RG-58/U jumper cable with silver/gold/teflon PL-259's on each end..... **\$9<sup>95</sup>**

## PAR OMNIANGLE Horizontally Polarized Omnidirectional Antennas



For 6 or 2m SSB mobile or fixed stations. Outperforms traditional halo and turnstile designs. It's considerably longer than a dipole and coupled with the unique shape, yields a horizontally polarized antenna whose pattern is within 0.8dB of being a perfect circle. Wide bandwidth and plastic shrouding virtually eliminates severe detuning due to moisture. Tuning is simple and no tools are required. Power handling: 160W.

Stacking two or four of these antennas results in an omni-directional pattern, low radiation angle with gain equivalent to medium sized Yagi antennas.

**OA-144** Tuning range: 138 to 150MHz ..... **\$54<sup>95</sup>**

**OA-50** Tuning range: 49.5 to 54MHz ..... **\$63<sup>95</sup>**



HT Pouch

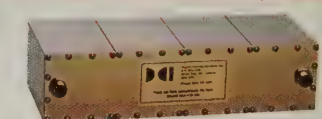
A protective carrying-case made of black nylon bonded to bouncy neoprene. Includes a quick-release, snap-out belt-loop clasp and a restraining-strap secured on the front with velcro. A foam block bumper in the bottom can be easily removed to accommodate larger batteries. Convenient Chest Pouches also available.

See POUCH the Price List



Chest Pouch

DCI DIGITAL COMMUNICATIONS



Bandpass Filters

Finally clear reception! This filter Installs between your 2m, 220 or 440MHz rig and antenna to reduce the strength of out-of-band interfering signals while allowing the signals you want to hear pass through at full strength.

- Eliminate the random squeals, squawks, beeps and strange voices from your VHF radio caused by Intermod from strong, nearby pagers, police radio systems, taxis, etc.).
- Hear the signals you want to hear even in crowded urban centers with high-powered commercial systems.
- Design: (2M/220MHz) four helical resonators with aperture coupling, (440MHz) four 1/4-wave linear resonators with aperture coupling
- Accepts 200 watts of power • Reduces spurious transmitter emissions. • VSWR 1.5:1
- Made of extruded aluminum, copper and brass. 12w" x 3"hx 5"d, 2 lb, 11oz • Totally passive, does not need DC power

### 2M models

**146-4H** Passband: 144-148; Loss <1 dB; Selectivity: -57dB @ 136MHz & -43dB @ 156MHz; SO-239 silver-terflon connectors ..... **\$89<sup>95</sup>**

**145-2H** - Passband 144 to 146 MHz ..... **\$89<sup>95</sup>**

### 220MHz model

**223.5-3H** - Passband: 222 to 225MHz; Loss 1 dB; Selectivity: -33dB at 233 3MHz and -28dB at 233 MHz; SO-239 silver-terflon connectors..... **\$89<sup>95</sup>**

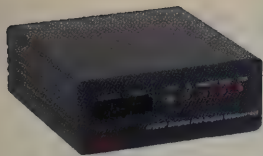
### 440MHz models

**445-10C** 440MHz models - Passband: 440 to 450MHz; Loss 1 dB; Typical selectivity: -47dB at 425MHz and -50dB at 456 MHz; Type-N silver-terflon-gold connectors ..... **\$109<sup>95</sup>**

**435-10C** - Passband 430 to 440MHz..... **\$109<sup>95</sup>**

Upgrade to type-N connectors on 2m and 220MHz models - add \$10 to price; Special Order





## TELEPHONE INTERCONNECTS

**CES**  
WIRELESS  
TECHNOLOGIES

### 4700VP Telephone Interconnect

- The Most Versatile Simplex or Half Duplex Patch
- True DTMF Regeneration
- 25 Speed Dial Locations • CW-ID
- Full Remote "Over-the-Air" Programming • Local programming
- VERATEC Smart Sampling VOX enhanced Protocol or Simple VOX Control
- Automatic Setup
- Automatic Last Number Redial
- User Programmable ID Code
- Comprehensive Toll Restrict with Override Code • Hook Flash
- Call Limit Timer • Courtesy Beep
- Time Out Timer/Warning Beeps
- Reverse Patch Ring
- Repeat Audio
- Busy Channel Inhibit
- CTCSS Logic Input
- Lightning Protection
- Connect/Disconnect Control
- Tone Dialing/Multi-Country Pulse Dialing
- Extremely Compact and Rugged Construction (1.5 x 4 x 4 inches)
- **SPECIAL \$169<sup>95</sup>**



### SDI-50 Automatic Simplex Interconnect

Gives telephone access to handhelds and mobiles. Remotely programmable from any DTMF phone. Converts base stations to a remote station accessible from any telephone. VOX-enhanced sampling, automatic CW ID. AC adapter and cables. 14 1/4" w x 8 3/4" d x 11 1/2" h, 3 1/2 lbs ..... **\$469<sup>95</sup>**

## GROTHE Sirens & Horns

### VS-2 Emergency Vehicle Siren

Designed for the Volunteer Fireman, a quality built wail-yelp alarm that delivers big sound performance – a whopping 120Db sound level at 4 ft. Frequency range, 600 to 1200Hz. Pre-wired with a 3-position switch (Yelp-Off-Wail), high efficiency waterproof horn speaker, 10 ft. cable, mounting bracket and hardware. Requires 12VDC @ 1.5A, 2.7 lbs ..... **\$89<sup>95</sup>**



### VS-3 Vehicle P/A and AirHorn with Rebroadcast

A big, powerful airhorn sound with four different sounds (no siren) really calls attention to your vehicle. Delivers 120 Db at 4 ft. By locking down the microphone with the supplied rubber band, you can monitor sound from a mobile rig, scanner or radio via the speaker outside. Includes horn speaker, microphone, electronic center, 10 ft. cable, mounting bracket and hardware. 12 VDC @ 1.5A ..... **\$129<sup>95</sup>**



**VS-4 P/A Emergency Vehicle Siren** Contains P/A, Rebroadcast, Wail, Yelp, Pulse, Airhorn and P/A Override features, plus volume control of all siren modes. Restricts output when operating in people places. Includes horn speaker, microphone, 3" x 3 1/2" x 2" electronic center, 10 ft. cable, mounting bracket and hardware. 12V DC @ 1.5A **\$139<sup>95</sup>**

**Siren-Light Combo** A one-unit siren/yelp alarm, revolving halogen or strobe light and window mount. Fits all cars, slides on top of the car window and plugs into cigarette lighter outlet. The power plug contains as an "on" LED and three position switch to select yelp, off or wail. Requires 12 VDC @ 5A.



**VS-2L Halogen** amber, blue or red ..... **\$249<sup>95</sup>**  
**VS-2LS Strobe** amber, blue or red ..... **\$299<sup>95</sup>**

**CSI**®  
CONNECT SYSTEMS INC.

CSI interconnects provide a fully automatic interface between your FM base radio and phone line so that you can initiate and receive phone calls in your mobile or on your HT without assistance.

The CS-800 & CS-900 below each contains powerful microprocessor controlled features such as

- 90 Memory Speed Dialer • Last Number Redial
- Built-in Programming Keyboard and Digital readout
- Remote Base Mode • Regenerated Tone or Pulse Dialout • CW ID • Toll Restrict numbers and sequences... and More!



### CS-800 Interconnect

Operates Full or Semi duplex and also has a built-in Repeater Controller. Simply connects to transceiver mic and speaker jacks. FCC & DOC approved. 12-15 VDC. 7 1/4" w x 7 1/2" d x 2" h, 2 1/2 lbs ..... **\$359<sup>95</sup>**



### CS-900 Interconnect

A simplex interconnect for use with any simplex transceiver. Can also be used through remotely located repeaters (from your base) for additional range. Digital voice delay is standard. Connects to microphone & speaker jacks of a simplex transceiver. FCC & DOC approved. (Transceiver switching speed does not affect performance). 12-15 VDC. 7.9" w x 7.5" d x 2" h, 2.5 lbs ..... **\$359<sup>95</sup>**

### CD-2 Communications Decoder Unit

When mobile, the CSI CD-2 will make it easy for you to use open repeaters and autopatches because it decodes and displays any CTCSS, DCS or DTMF codes other amateurs are using on the channel. When at the base, the RS-232 port exports all decoded CTCSS/DCS or DTMF data to your PC allowing use of CD-2P software. Maintains a history of CTCSS/DCS/DTMF data from the CD-2 occurring on the channel being monitored, creates usage graphs, etc. PC/DOS based. 12-15 VDC. 4.9" w x 4.5" d x 1.9" h, 1 lb ..... **\$249<sup>95</sup>**

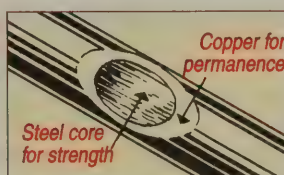
**CD-2P PC Program for CD-2** ..... **\$99<sup>95</sup>**

For additional information you may contact CSI at:

Phone: 805-642-7184 • Fax: 805-642-7271  
e-mail: sales@connectsystems.com  
Internet: www.connectsystems.com

## CASTLE RIDGE PRODUCTS, INC

**COPPERWELD®**  
Antenna Wire  
FORGE-WELDED  
makes the two metals  
inseparable!



**Solid bare copper-over-steel wire – Best for antennas**  
Very strong, steel core has very little stretch and long service life. Copper covering provides low RF resistance, easy to solder. Choice of 12, 14 or 18 gauge, 100, 150, 250, 500 or 1000 ft. rolls.

AN-122 100 ft. #12... <b>\$24<sup>95</sup></b>	AN-143 150 ft. #14... <b>\$24<sup>95</sup></b>
AN-123 150 ft. #12... <b>29<sup>95</sup></b>	AN-144 250 ft. #14... <b>32<sup>95</sup></b>
AN-124 250 ft. #12... <b>49<sup>95</sup></b>	AN-146 500 ft. #14... <b>56<sup>95</sup></b>
AN-126 500 ft. #12... <b>84<sup>95</sup></b>	AN-148 1000 ft. #14... <b>99<sup>95</sup></b>
AN-128 1000 ft. #12. <b>139<sup>95</sup></b>	AN-181 250 ft. #18... <b>14<sup>95</sup></b>
AN-142 100 ft. #14... <b>19<sup>95</sup></b>	AN-182 500 ft. #18... <b>24<sup>95</sup></b>

## W5YI/WEST

### STUDY GUIDES

### TECHNICIAN NO CODE PLUS STUDY GUIDE by Gordon West, WB6NOA

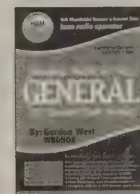
Anxious to get on the air? Here's everything you need to become a Ham – quick & easy without the Morse code test! New 3rd edition, by Gordon West, WB6NOA covers the newest exam questions of July 1, 1997 to June 30, 2001. Fully illustrated textbook includes all possible questions, multiple choices & answers. **GWTM \$12<sup>95</sup>**



### OTHER TEST STUDY MANUALS

by Gordon West, WB6NOA

**GWGM** General Class Study Manual ..... **\$9<sup>95</sup>**  
**GWAM** Advanced Class Study Manual ..... **\$11<sup>95</sup>**  
**GWEM** Extra Class Study Manual ..... **\$11<sup>95</sup>**



## VIDEO

### NO CODE TECHNICIAN AMATEUR RADIO LICENSING SEMINAR

**NCVP** Updated Version! Now you can easily become a licensed ham operator without learning the Morse Code. Easy-to-follow training course teaches what you need to know to get your Technician ticket. 88 minutes .... **\$31<sup>95</sup>**



## TAPES

### THEORY TAPES by Gordon West, WB6NOA

**GWNW** Novice Written Theory, 2 tape set ..... **\$9<sup>95</sup>**  
**GWTW** Tech Written Theory, 2 tape set ..... **\$9<sup>95</sup>**  
**GWGW** General Written Theory, 2 tape set ..... **\$9<sup>95</sup>**  
**GWAW** Advanced Written Theory, 4 tape set ..... **\$19<sup>95</sup>**  
**GWEX** Extra Written Theory, 4 tape set ..... **\$19<sup>95</sup>**

### MORSE CODE TEST PREPARATION

**GWNT** Code Teacher 0-5 WPM ..... **\$9<sup>95</sup>**  
**GWGT** General Class Code, 3-15 WPM ..... **\$9<sup>95</sup>**  
**GWET** Extra Class Code, 12-21 WPM ..... **\$9<sup>95</sup>**

### RADIOTELEGRAPH TRAINING COURSES

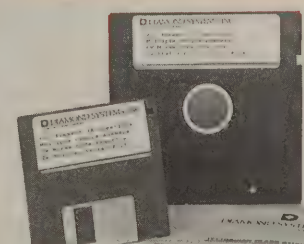
Each has 6-tape course prepares you to pass Novice, General or Extra Class exams • "Gordo" voice Instructions • Rapid Farnsworth Method • Plain Language & Random • Lots of Humor!

**GWN6** For Beginners, 0 to 7 WPM ..... **\$29<sup>95</sup>**  
**GWG6** For Speed Building, 5 to 16 WPM ..... **\$29<sup>95</sup>**  
**GWEX** For Advanced Telegraphers, 10 to 28 WPM ..... **\$29<sup>95</sup>**

## W5YI SOFTWARE

### IBM COMPATIBLE

**NCS** No Code License Software ..... **\$29<sup>95</sup>**  
**HOS** No Code thru Extra Class License Software ..... **\$39<sup>95</sup>**



## DIAMOND Systems

Amateur Radio License Study Courses for IBM PC/XT/AT and "look-alikes" using PC/MS DOS

**It's Easy! .. all the LATEST study material needed for the FCC Exam • Theory, Code, and Regulations – included.**  
Prep material for Amateur Licenses Novice through Extra class and No-Code Technician! Software includes complete FCC VEC questions, all sub elements, generates 1000's of practice tests, keeps score, plus a code teaching program.

**DS-IBM-N** Novice class .... **\$39<sup>95</sup>** **DS-IBM-G** General class .... **\$34<sup>95</sup>**  
**DS-IBM-T** Technician class .. **34<sup>95</sup>** **DS-IBM-A** Advanced class .. **49<sup>95</sup>**  
**DS-IBM-NC** No Code Tech.. **49<sup>95</sup>** **DS-IBM-E** Extra class ..... **49<sup>95</sup>**





# MICROPHONES • HEADSETS • ACCESSORIES

## HEIL PRO-SET

### Boomset Headphones

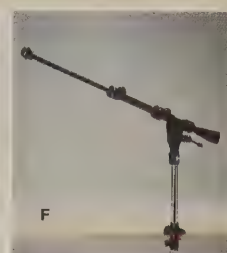
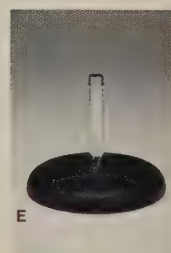
A rugged, lightweight boomset designed for long wearing time during contests, etc. The headband has detents on each side for adjustment, and is fully padded for comfort. The vinyl earpads are also heavily padded, seal out noise, and are removable for washing. The flexible microphone boom adjusts to about any location and folds up for storage. Includes HEIL HC-4 or HC-5 mic cartridge (below) ..... **\$131<sup>95</sup>**

**AD-1 Adapter Cables (D)** for use with ICOM, KENWOOD, TEN-TEC or YAESU transceivers ..... **\$14<sup>99</sup> ea.**

## HEIL PRO-MICRO

### Boomset Headphones

The Pro Micro is the newest addition to the Heil Pro line. It replaces the old BM-10 and BM-5 series headsets. It is simply a miniature version of the Pro Set. Its main feature besides being smaller and lighter weight is that it does not cover the entire ear. Hams want to hear their surroundings. Using the Heil Pro-Micro you can do just that. Available with the HC-4 or HC-5 element (below) ..... **\$105<sup>95</sup>**  
**AD-1 Adapter cables (D)** for use with ICOM, KENWOOD, TEN-TEC or YAESU transceivers ..... **\$14<sup>99</sup> ea.**



**PRO 5 (A)** To answer the concern of not covering both ears, the Pro 5 was created. Provides all of the same quality and performance as the Pro Set with out covering the right ear. Available with either the HC-4 or HC-5 element (below). Use AD-1 adapter (above), specify HC-4 or HC-5 ... **\$120<sup>95</sup>**

**HM-10 MICROPHONE (B)** Hand-held studio-style microphone with desk stand or boom mount options. Choice of HEIL cartridges. Operate PTT or VOX, it's designed to work with virtually any late model transceiver. When ordering specify HC-4 or HC-5 cartridge (below)..... **\$63<sup>96</sup>**

**HM-10 DUAL (C)** Amateur Radio's *ultimate* microphone. Versatile in that it has *both* HC-4 DX element and HC-5 Full Range microphone cartridges built-in – and switch selectable for varying conditions ..... **\$112<sup>96</sup>**

**HM-10 CABLES** (not pictured) Designed to work with any transmitter. When ordering specify your radio and the HM-10 will be shipped with the correct color coded cables. Specify for ICOM (HEI CC1D), KENWOOD (HEI CC1K) or YAESU (HEI CC1Y), ..... **\$25<sup>99</sup>**

**TB-1 TABLE BASE (E)** For HM-10 series microphones. 6 inches high heavy (2 lb., 10 oz) cast metal base with non-skid cork feet. .... **\$19<sup>95</sup>**

**MA-1 BOOM AND CLAMP ASSEMBLY (F)** For HM-10 series microphones. The boom is adjustable from 6 to 24 inches and attaches to desk or shelf, or hangs from ceiling. Swivels a full 360° and places HM-10 or DUAL TEN microphone exactly where you want it. You can use the FS-1 footswitch for convenient, hands-free PTT operation..... **\$49<sup>99</sup>**

**FS-1 FOOT SWITCH (G)** Provides convenient foot-control of PTT function of any transmitter. Non-skid rubber pad on both top and bottom, supplied with 7 ft. cable and 1/4" phone plug. .... **\$26<sup>95</sup>**

## HEIL MICROPHONE CARTRIDGES

Most communications microphones today were designed for public address – not for SSB, with the frequency response needed for getting through pile-ups, or providing maximum voice clarity. If you aren't satisfied with the “sound of your

station”, you can solve this problem by replacing the cartridge in your microphone with a **HEIL KEY ELEMENT** for a dramatic improvement. It's tiny in size, and easily replaces existing cartridges in most microphones.

### HC-4 – The DX Dream Machine

The replacement microphone cartridge for Contest and DX operators. It's engineered with a high-pitched, pile-up busting frequency response of 500Hz to 3800Hz with a 10dB peak at 2000Hz, and a sharp 12dB per octave roll off at 500Hz. Provides your rig with excellent clarity and more punch for getting through the pile-ups. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: 0.530" d x 0.850" w x 0.310" h ..... **\$29<sup>95</sup>**



### HC-5 – The Key Element

The replacement microphone cartridge for everyday Rag Chewing. Engineered with full range articulation and maximum voice clarity. Not mushy, bassy paging-type audio, but very clear, easy-to-understand SSB audio. Response: 350Hz to 4000Hz, with a sharp roll-off under 300Hz and above 3100Hz with a peak at 2100Hz. Impedance: 2kΩ @ 1000Hz – works well into low (500-600Ω) and medium (2k-5kΩ) inputs. Cardioid pattern. Size: 0.530" d x 0.850" w x 0.310" h ..... **\$29<sup>95</sup>**



# More hams use MFJ accessories than all others in the world!

## NEW! MFJ 2 Meter FM Analyzer™

MFJ's revolutionary handheld 2 Meter FM **MFJ-224** **SignalAnalyzer™** lets you measure signal strength **\$149.95** with over 60 dB dynamic range, check and set FM deviation of your packet and voice radios, measure antenna gain, beamwidth, front-to-back ratio, sidelobe suppression, measure actual feedline loss in dB, and much, much more!

**Plug** in any scope and your MFJ FM SignalAnalyzer™ becomes a service monitor! It lets you visually analyze modulation wave forms, measure audio distortion, noise and instantaneous peak deviation. You can tune in any signal between 143.5 and 148.5 MHz. It's built-in discriminator-meter function makes accurate tuning simple and easy.

## MFJ-422C Keyer/Benchner Paddle Combo

**MFJ-422C** MFJ's deluxe keyer/Benchner paddle combo is **\$124.95** the best of all CW worlds -- a deluxe MFJ keyer in a compact configuration fits right on the Benchner iambic paddle. The MFJ Keyer gives you adjustable weight and tone and has front panel volume and speed controls (8-50 wpm). You also get built-in dot-dash

memories, speaker, sidetone and push button selection of semi-automatic/tune or automatic modes. Reliable solid state keying: grid-block, cathode and solid state transmitter.

## NEW MFJ Earphone/Microphone

**MFJ-292** Carry on quiet and **\$17.95** I, K, Y discreet QSOs with this convenient and comfortable earphone/microphone. Has tiny thumbsize microphone with PTT switch built-in the cord. A high quality dynamic earphone and electret microphone gives you handheld crystal clear audio.

Ultra-lightweight - 30 grams. 8 Ohm dynamic earphone handles 250 mW. Non-directional electret condenser microphone has -64 dB sensitivity and 1.1K Ohm impedance. 4 foot long cord, made of high-impact plastic.

## MFJ-462B CW/RTTY/ASCII/AMTOR FEC Multi-Reader™ taps into secret signals

**MFJ-462B** **\$159.95** **Plug** this stand alone MFJ MultiReader™ into your shortwave receiver's earphone jack. Watch mysterious signals turn into exciting text messages across the LCD display. No computer, interface, program, special cables are needed. Eavesdrop on the latest breaking news from press agencies all over the world. Plug in your Epson compatible printer for automatic 24 hour-a-day monitoring. Use 12 VDC or 110 VAC with MFJ-1312B AC adapter, \$12.95. MFJ-5162, \$4.95 Reader-to-radio cable.

**MFJ-432 Contest Memory Voice Keyer.....\$99.95**  
**MFJ-860 Cross-Needle Wtmtr 1.8-60 MHz.....\$39.95**  
**MFJ-862 Cross-Ndl Mtr 144/220/440 MHz.....\$49.95**  
**MFJ-864 Cross Ndl Mtr 1.8-60/144/440 MHz.....\$79.95**  
**MFJ-1118 High current DC Multi-outlet.....\$69.95**  
**MFJ-1702B 2 pos. antenna switch, 450 MHz.....\$21.95**  
**MFJ-1704 4-pos. antenna switch, 500 MHz.....\$59.95**  
**MFJ-1721 2-Meter Mag mount UltraLite™.....\$14.95**  
**MFJ-1722 Dual band mag mnt UltraLite™.....\$18.95**  
**MFJ-1724B Dual band mag mnt w/BNC.....\$14.95**  
**MFJ-1728B 2 Meter 5/8 wave mag mnt.....\$24.95**  
**MFJ-1729 Super Gain Dual Band mag mnt.....\$29.95**  
**MFJ-1730 Pocket Roll-Up Antenna 2 Meter.....\$14.95**  
**MFJ-1734 Glass Mount Dual Band Antenna.....\$39.95**  
**MFJ-1738 2 Meter Glass Mount Antenna.....\$29.95**  
**MFJ-1740 1/4 Wave ground plane, 2Meter.....\$12.95**  
**MFJ-1750 5/8 Wave ground plane 2 Meter.....\$19.95**



## MFJ-945E Mobile 1.8-30 MHz plus 6 Meter Antenna Tuner

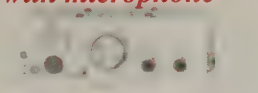
**Don't** leave home without this mobile **MFJ-945E** **\$89.95** tuner! Have an uninterrupted trip as the MFJ-945E extends your antenna bandwidth and eliminates the need to stop, go outside and readjust your mobile whip. Now covers 6 Meter band and has antenna bypass switch! Handles 300 Watts.

**Small** 8x2x6 inch black aluminum cabinet uses little room. The new Cross-Needle meter shows SWR, forward and reflected power -- at a glance in 300/60 and 30/6 watt ranges. Has on/off lamp switch. Requires 12 volts for lamp. Convenient placement of controls makes tuning fast and easy while in motion. Antenna switch lets you bypass tuner and still use the SWR/Wattmeter. Back panel has SO-239 connectors and wing nut post for your ground.



## MFJ-9406X 6 Meter Adventure Radio with microphone

**Turn** it on. Distant stations roll in loud **MFJ-9406X** **\$239.95** and clear, thanks to the MFJ-9406X's quiet crystal-mixed single conversion receiver. It raises 10 watts PEP to new heights -- delivering the punch of a much more powerful radio. Full CW/SSB coverage, low power drain, excellent selectivity, TVI protection -- built-in 7 element 60 MHz low pass filter, full-size analog real S-meter, smooth reduction drive analog VFO tuning, built to last, and is a compact 2 1/2x6 1/2x6 inches. Includes MFJ-290 microphone.



## MFJ Mini Yaesu Speaker/Mic

**MFJ's** **MFJ-295Y** **\$24.95** new Yaesu mini speaker/mic uses a high-quality non-directional Electret condenser microphone to give you superb crystal clear audio. High quality microphone is a perfect companion to your Yaesu FT-10R, FT-40R, FT-50R, or VX1 handheld transceiver! Uses a 1.4" speaker to produce 83 dB of crystal clear audio. Impedance is 8 Ohm. Non-directional electret condenser microphone has -53 dB sensitivity and 1 K Ohm impedance. 3 1/2 feet of retractable cord.



## MFJ-1796 Six Band (40 thru 2 Meters) Vertical Antenna

**Operate** 40, 20, 15, **MFJ-1796** **\$179.95** 10, 6, and 2 Meters with this MFJ-1796 ground independent halfwave vertical antenna -- no radials or ground ever needed! It's only 12 feet high and has a tiny 24 inch footprint! You can mount it anywhere from ground level to the top of a tower -- on apartments, condos, anywhere. Perfect for vacations, field day, DX-pedition, camping, nearly anywhere you go. Frequency selection is fully automatic -- no moving parts, nothing to adjust. Handles 1500 Watts PEP SSB. Omni-directional. Efficient end loading.



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**No Matter What™**  
 Your MFJ product comes with MFJ's famous No Matter What™ one year limited warranty. MFJ will repair or replace your MFJ product (at our option) no matter what for a full year.

**These are just a few of the many MFJ products that AES stocks and sells! Give them a call for all MFJ merchandise and a great price!**

**MFJ-1754 Dual Band base 144/400 Antenna.....\$24.95**  
**MFJ-1762 three element 6 Meter Antenna.....\$69.95**  
**MFJ-1763 portable three element 2M Antenna.....\$39.95**  
**MFJ-1764 Dual 2-Meter 5/8 wave/6 Meter.....\$44.95**  
**MFJ-1768 Dual Band 144/440 MHz Yagi.....\$69.95**  
**MFJ-1772 20 M dipole ant for CW/SSB.....\$34.95**  
**MFJ-1774 40 M dipole ant for CW/SSB trans.....\$34.95**  
**MFJ-1776 Six Meter dipole ant for CW/SSB.....\$34.95**  
**MFJ-1778 G5RV All Band HF Antenna.....\$29.95**  
**MFJ-1786 10-30 MHz Hi-Q Loop Antenna.....\$269.95**  
**MFJ-1788 40 Meter Super Hi-Q Loop Ant.....\$329.95**  
**MFJ-1798 Vertical Antenna 80M thru 2M.....\$249.95**  
**MFJ-2400 Baud modem for packet (Reduced!) - \$29.95**  
**MFJ-4110 AC Portable Power Sup/120 V.....\$39.95**  
**MFJ-4114 Rechargeable Power Pack/120 V.....\$69.95**  
**MFJ-8100K World Band SWL Receiver Kit.....\$59.95**  
**MFJ-8621 VHF Data Radio (145.01 MHz).....\$109.95**

**MFJ-8621X1 VHF data radio for APRS.....\$129.95**  
**MFJ-8631 220 MHz Data Transceiver.....\$129.95**  
**MFJ-9017 CW Transceiver/17 Meters.....\$139.95**  
**MFJ-9020 CW Transceiver for 20 Meters.....\$169.95**  
**MFJ-9040 CW Transceiver/40 Meters.....\$169.95**  
**MFJ-9420X Travel Radio SSB/ 20 M w/mic.....\$219.95**  
**MFJ-9440X Travel Radio SSB/40 M w/mic.....\$219.95**  
**MFJ-9475X Travel Radio SSB/75-80M & mic.....\$219.95**  
**MFJ-9600B G3RUH 9600 Baud modem.....\$99.95**  
**MFJ-16010 Random Wire Tuner for HF.....\$39.95**  
**MFJ-5383Y/K/I Xcvr Interface cable.....\$49.95**  
**MFJ-9-102 MFJ 25 Anniversary Coffee Mug.....\$3.95**  
**MFJ-333 Mobile Handbook by Dave Ingram.....\$12.95**  
**MFJ-3036 Packet Radio Op. by Buck Rogers.....\$12.95**  
**MFJ-3302 Dipole and long wire by Ed Noll.....\$12.95**  
**MFJ-3506 Ferromagnetic-Core-Doug DeMaw.....\$19.95**  
**MFJ-3305 Ant. & Trans.Lines by Kuecken.....\$19.95**

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**AES has been with MFJ from the beginning . . . And for 25 years has continued to sell more MFJ merchandise than any other dealer in the world! Thanks AES for helping MFJ grow to celebrate its 25 year anniversary! Keep up the great work!**

## MFJ HF/VHF SWR ANALYZER™ with resistance meter

The MFJ-259 is the world's most popular HF/VHF SWR Analyzer! Instantly read your antenna SWR and RF resistance from 1.8 to 170 MHz. Diagnose a wide range of antenna problems.

You get four instruments in one -- 10-digit LCD frequency counter, RF signal generator, SWR Analyzer™ and RF Resistance Meter™.

Measure antenna resonant frequencies and 2:1 SWR bandwidths. Adjust mobile antennas, antenna tuners and matching networks in seconds. Tune critical HF mobile antennas in seconds -- without subjecting your transceiver to high SWR. Adjust your tuner for a perfect 1:1 match! More!

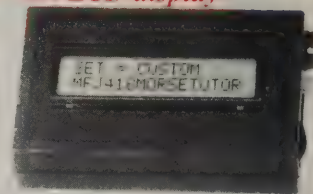
MFJ-259  
\$219<sup>95</sup>



## MFJ pocket size Morse Code Tutor with LCD display

Learn Morse code fast any where, any time with this tiny MFJ Pocket Morse Code Tutor™! MFJ-418 gives you a large LCD display that reads out letters, numbers and punctuation in plain English. See code as it's sent!

MFJ-418  
\$79<sup>95</sup>

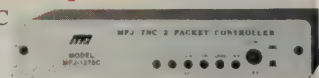


MFJ's proven beginner course takes you from zero code speed to solid copy fast. QST rate MFJ tutors "the clear choice for beginners". Follows ARRL/VEC format. Change speed 3-60 wpm. Practice copying realistic plain English QSOs, random words, letters, prosigns, FCC exam and much more! You'll never run out of practice!

## MFJ VHF/HF Packet TNCs are GPS compatible

MFJ-1270C is the world's most reliable packet TNC -- many work 24 hours a day without failure! Fully TAPR TNC-2 compatible, VHF and HF operation, free AC power supply. Enhanced mailbox with auto/reverse mail. GPS compatible, KISS interface. You get MFJ's Anti-Collision™ technology that prevents Packet collisions and improves performance on busy channels. If you want a TNC that'll work 24 hours a day without failure, get the ultra reliable MFJ-1270C!!!

MFJ-1270C  
\$109<sup>95</sup>



## MFJ super Tunable DSP Filter has "brick wall" filters

MFJ tunable super DSP "brick wall" filters knock out interference and noise by up to 57 dB. Automatic notch eliminates heterodynes. Adaptive noise reduction. Works with all voice, CW, data signals. Plugs between radio and speaker/phones.

MFJ-784B  
\$229<sup>95</sup>



## MFJ-949E Deluxe 300 Watt Tuner

MFJ-949E  
\$139<sup>95</sup>



More hams use MFJ-949s than any other antenna tuner in the world! Match nearly any antenna. Has lighted peak and average reading Cross-Needle SWR/Wattmeter, full size dummy load, 8 position antenna switch, 4:1 balun, heavy duty inductor switch. Covers 1.8 to 30 MHz. Handles 300 watts PEP SSB. Scratch-proof cabinet.

## MFJ-989C 3KW RollerInductor Antenna Tuner has AirCore™ Roller Inductor

MFJ-989C  
\$299<sup>95</sup>

The rugged MFJ-989C handles 3 KW



PEP SSB and covers 1.8 to 30 MHz including all MARS and WARC bands. MFJ's new AirCore™ Roller Inductor, three-digit turns counter and spinner knob gives you exact inductance control for absolute minimum SWR. Has massive transmitting capacitors, super antenna switch, 3 KW current balun, built-in dummy load, Cross-Needle Meter and More!



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Your MFJ product comes with MFJ's famous No Matter What™ one year limited warranty. MFJ will repair or replace your MFJ product (at our option) no matter what for a full year.

**See below for just a few of the many MFJ products that AES stocks and sells! Give AES a call for all MFJ merchandise and a great price!**

## 300 Watt Roller Inductor Tuner



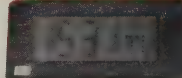
MFJ-969  
\$169<sup>95</sup>

New MFJ-969 has MFJ's super AirCore™ Roller Inductor and continuous 6 Meter thru 160 Met

coverage! All the features of the popular MFJ-949E: QRM-Free PreTune™, 8 position antenna switch, full size dummy load, lighted Cross-Needle Meter, 4:1 balun and much more

## JUMBO 24/12 Hour LCD Clock

MFJ-118  
\$24<sup>95</sup>



Glance

across the room of your shack and get the date, day and 24 or 12 hour time simultaneously. MFJ-118 has huge 1 1/4" LCD digits. Clock is a handsome black, durable plastic that looks good mounted on the wall or displayed on your operating position. Displays day of week in four languages. 5 1/2 Wx2 1/2 H".

## MFJ GuardianAngel™ Lightning Surge Protector

MFJ-270 MFJ-270  
can shunt \$29<sup>95</sup>



up to 5000 amps of peak impulse current. No station can take a direct lightning hit, but MFJ's Guardian Angel™ can protect your expensive equipment from dangerous static electricity. Works up to 400 Watts PEP.

MFJ-29B, Carrying pouch for 259.....	\$24.95
MFJ-66, Dip meter coils for analyzers.....	\$19.95
MFJ-105C, 24 Hour Quartz wall clock.....	\$19.95
MFJ-108B LCD 12/24 Hour dual clock.....	\$19.95
MFJ-112 Deluxe world map clock.....	\$24.95
MFJ-116 1D Timer LED clock 12/24 hour.....	\$14.95
MFJ-201 1.5-250 MHz dip meter.....	\$109.95
MFJ-212 MatchMaker™ for tuner.....	\$79.95
MFJ-219 440 MHz SWR Analyzer.....	\$89.95
MFJ-250 Dummy load can with oil.....	\$49.95
MFJ-264 Dry dummy load, 0-650 MHz.....	\$59.95
MFJ-281 ClearTone™ speaker.....	\$9.95
MFJ-306 World band SWL car rad. convrt.....	\$79.95
MFJ-401C Econo Keyer.....	\$49.95
MFJ-407C Deluxe Keyer.....	\$69.95
MFJ-441 SlimLine™ Econo Keyer.....	\$59.95
MFJ-442 SlimLine™ Keyer/Paddle.....	\$129.95

MFJ-447 SlimLine™ Deluxe Keyer.....	\$74.95
MFJ-452 CW Keyboard keyer w/display.....	\$119.95
MFJ-490 Memory keyer/Benchmer combo.....	\$149.95
MFJ-493 32K menu driven memory keyer.....	\$129.95
MFJ-557 Deluxe Code Practice Oscillator.....	\$24.95
MFJ-564/B Iambic black/Chrome paddles.....	\$49.95
MFJ-711 High pass filter.....	\$19.95
MFJ-752C Dual Tunable Audio Filter.....	\$89.95
MFJ-815B Cross-Needle Meter 1.8-60 MHz.....	\$69.95
MFJ-817 Cross-Needle SWR WattMter.....	\$79.95
MFJ-901B HF Tuner 200 Watt.....	\$69.95
MFJ-903 6 M Tuner 50-54 MHz.....	\$49.95
MFJ-906 (6M) Tuner w/wttmtr, 50-54MHz.....	\$79.95
MFJ-912 W9INN Balun Box.....	\$39.95
MFJ-914 Auto Tuner Extender.....	\$59.95
MFJ-916 144/440 MHz Duplexer.....	\$29.95
MFJ-921 144/220 MHz tuner/wttmtr.....	\$69.95

MFJ-924 440 MHz tuner/wattmeter.....	\$69.95
MFJ-962D Versatile 1.5 KW Roller Tuner.....	\$229.95
MFJ-941E 300 Watt Versa Tuner.....	\$99.95
MFJ-959B SWL Preamplifier/Tuner.....	\$99.95
MFJ-1020B SWL Indoor Active Antenna.....	\$69.95
MFJ-1024 SWL Outdoor Antenna.....	\$119.95
MFJ-1025 Noise Canceling Antenna.....	\$109.95
MFJ-1045C Revr/Preselct 1.8-54 MHz.....	\$49.95
MFJ-1214PC IBM, digital decoder.....	\$139.95
MFJ-1272B/M TNC/Mic switch-MFJ/TNC.....	\$39.95
MFJ-1276 Packet plus Pactor TNC.....	\$129.95
MFJ-1278B DSP All digital mode TNCw/DSP.....	\$349.95
MFJ-1289M MultiCom™ for DOS.....	\$59.95
MFJ-1289W MultiCom™ for Windows.....	\$59.95
MFJ-1680L/K/Y Logview Windows.....	\$79.95
MFJ-1700B 6 position antenna switch.....	\$69.95
MFJ-1701 Six position antenna switch /HF.....	\$39.95

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**390 Test Bench™ (left)** A multimeter. with AC/DC Voltmeter, AC/DC Ammeter, Ohmmeter, Capacitance Meter, 500kHz Frequency Counter and Temperature Meter in one package. 0.1% DCV accuracy; Analog bargraph; Auto/manual ranging; 4,000 count LCD display; Relative mode; Min-max average; Memory; Audible continuity; Data hold. 7 1/2" x 3 3/8" x 1 1/8", 17 oz. .. **\$134<sup>95</sup>**

**2860A Digital Multimeter (center)** Rugged construction with water resistant case. Functions: AC/DC Voltmeter; AC/DC Ammeter (20A); Ohmmeter; Audible Continuity Check; Diode Tester. 3 1/2-digits, easy to read 0.8" LCD. 6 1/2" x 3 3/8" x 1 1/8", 12 oz. .. **\$99<sup>95</sup>**

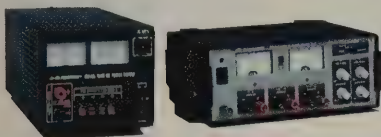
**2704A Digital Multimeter (right)** Measures: DCV 200mV-1000V; ACV 200mV-750V; DC and AC current to 10A; Ohms, 0.1Ω to 20MΩ; Capacitance to 20uF; and Transistor gain. 5 3/4" x 3" x 1 1/4", 13 oz. .... **\$59<sup>95</sup>**



**878 Dual-Display LCR Meter with Statistical Functions (left)** Excellent for sorting parts. Displays measured value & Q or dissipation factor and remembers minimum and maximum values while keeping a running average of tested component values. Relative mode displays difference between the measured and reference component values. Tolerance mode "beeps" to indicate measured components outside a 1%, 5% or 10% tolerance around a reference value. Selectable, 120Hz or 1kHz. 1 1/2" x 3 3/8" x 7 7/8", 14 oz. .... **\$219<sup>95</sup>**

**815 Parts Tester (center)** Tests transistors, SCRs, diodes, LEDs & batteries under actual load conditions. Capacitance 0.1pF-20mF; Resistance 0.1Ω-20MΩ, 26 ranges. 0.8" LCD. 6 1/2" x 3 3/8" x 1 1/8", 12 oz. .... **\$99<sup>95</sup>**

**4011 5MHz Function Generator (right)** Generates sine, triangle, square, pulse and ramp waveforms. TTL & CMOS Pulse outputs. 9 3/4" x 3 3/4" x 1 1/4", 6 lbs **\$239<sup>95</sup>**



#### General Purpose Lab Quality Power Supplies

Reverse polarity, overload thermal and short circuit protected. Tight regulation, low ripple. Conservatively rated for continuous operation at maximum rating.

**1686 High Current (left)** Output: 3 to 14VDC @ 2.5 to 12A. Continuous 12A duty at 13.8V DC without overheat. Reverse polarity protection, short circuit protection. Current limiting. Connect two in parallel to double the current, or two in series to double the voltage. Voltage and current limiting adjustments. 5 1/2" x 5 3/4" x 12", 12 lbs ..... **\$169<sup>95</sup>**

**1651 Triple Output (right)** Output: Two 0 to 24 VDC @ 0.5A; One fixed 5V at 4 Amps, continuous. Independent tracking, adjustable current limiting. Short circuit, overload, reverse polarity protection. 3 3/4" x 9 1/2" x 7 7/8", 11 lbs ..... **\$359<sup>95</sup>**

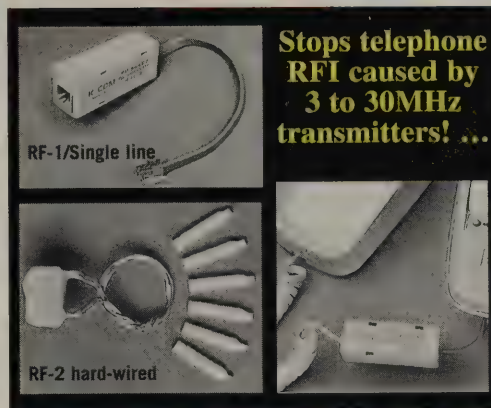
#### Scopes and Counters

For design, service or hobby. Scopes ranging from a 20MHz analog dual-trace unit to a versatile digital storage model. Multi-function counters built for continued high accuracy over a wide range of frequencies.



See Price List for a complete B&K listing

## K-COM Telephone RF Interference Filters



**Stops telephone RFI caused by 3 to 30MHz transmitters! ...**

Cure telephone RF interference in the most irritating cases even when dealing with transmitters with full legal power output. Use any number of filters with no adverse effect on telephone performance. Fully assembled, with complete installation instructions.

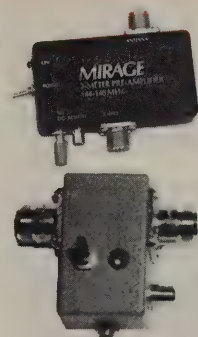
**RF-1** For single line equipment including wired and cordless telephones, answering and fax machines, modems, etc. Standard modular connectors ..... **\$16<sup>95</sup>**

**RF-1/2-line** The correct filter for two-line telephone sets, and multi-line multi-station electronic key phone systems in business environments ..... **\$22<sup>95</sup>**

**RF-1/coiled** For use when RFI enters through the coiled telephone cord between base & handset **\$22<sup>95</sup>**

**RF-2** Hard-wired, provides a wide range of installation options to add RFI rejection at a variety of physical and electrical locations in the system wiring. Inside phone jacks, behind wall mounted telephones, security systems, etc..... **\$10<sup>95</sup>**

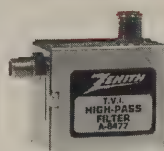
## MIRAGE GaAsFET Preamps for 10, 6, 2, 1 1/4 m & 70 cm



These High Gain, Ultra Low Noise GaAs FET Preamplifiers improve weak reception by providing from 15 to 25dB of receive gain with a Noise Figure of less than 0.6dB.

In-line design with automatic transmit & receive switching for up to 160 watts throughput. Choose the in-shack model (KP-1) or mast mount model (KP-2) which provides the additional benefit of reducing feedline loss.

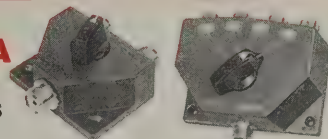
See MIRAGE in the Price List



#### ZENITH High Pass Filter

Install in TV antenna lead-in to eliminate interference from 6-160m transmitters. >45dB attenuation @ 52MHz & lower. For 75Ω systems, type-F connectors. 2" x 1 1/4" x 1" ..... **A-8477 \$9<sup>95</sup>**

## DAIWA Coaxial Switches



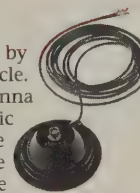
**CS-201** Two position Coax Switch (left) Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 600MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, the unused terminal is always grounded for protection..... **\$19<sup>95</sup>**

**CS-401** Four position Coax Switch (right) Cavity construction for low VSWR, less than 0.2dB insertion loss and 60dB isolation up to 800MHz. 2.5KW PEP or 1KW CW. SO-239 connectors, unused terminals are always grounded for protection. .... **\$119<sup>95</sup>**

## RF PRODUCTS

### BNC Magnetic Mount

Improve mobile HT performance by getting the RF outside of the vehicle. Simply attach the rubber duck antenna from your HT to this handy magnetic mount and place it outside, on the roof or trunk, where it can radiate without obstruction. 10 ft. coax cable & BNC connector ..... **199-416 \$17<sup>95</sup>**



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**AES** has the finest stock of Used Gear anywhere. We are always looking for Clean, Late Model SSB & FM Gear for trade.

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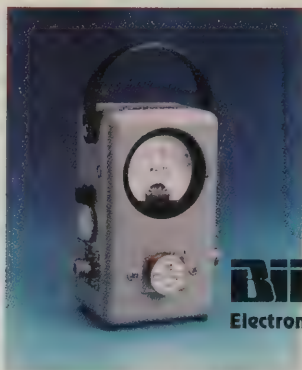
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**BIRD**  
Electronic Corporation

## 43 THRULINE® Wattmeter

Measures incident and reflected power in coaxial transmission lines with 5% of full-scale accuracy; insertion VSWR is less than 1.05. Comprised of a line section, and a direct-reading meter with expanded scales in 25, 50 and 100 units. Rugged aluminum case. Supplied with SO-239 Quick Change (QC) type connectors; optional N and BNC types available. Optional plug-in elements provide a wide choice of frequency ranges from 2-1000MHz, with power levels up to 5000W (2-30MHz) and up to 1000W (30-1000MHz). Select one or more elements now and add others as needed. 6 1/2"hx5 1/2"wx3 3/4"d, 3 lbs..... **\$263<sup>95</sup>**

## 43P Peak Reading Wattmeter Meter

Same versatile functions as the BIRD 43, but includes switch selectable Peak Reading (PEP) capability. Uses the same plug-in elements, QC connectors & accessories. Uses (2) 9V batteries ..... **\$396<sup>95</sup>**

## 4431 THRULINE® Wattmeter

Same as the 43, has a built-in variable RF signal sampler to provide an adjustable low level signal sample for counters, scopes, analyzers, etc... **\$464<sup>95</sup>**

**TABLE 1 Standard BIRD Elements**

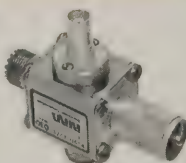
Power Range	Frequency Bands (MHz)					
	2-30	25-60	50-125	100-250	200-500	400-1000
5 watts	—	5A	5B	5C	5D	5E
10 watts	—	10A	10B	10C	10D	10E
25 watts	—	25A	25B	25C	25D	25E
50 watts	50H	50A	50B	50C	50D	50E
100 watts	100H	100A	100B	100C	100D	100E
250 watts	250H	250A	250B	250C	250D	250E
500 watts	500H	500A	500B	500C	500D	500E
1000 watts	1000H	1000A	1000B	1000C	1000D	1000E
2500 watts	2500H					
5000 watts	5000H					

**TABLE 2 Low-Power BIRD Elements**

1 watt	Cat. No.	2.5 watts	Cat. No.
25-30 MHz	025-1	25-30 MHz	025-2
30-35 MHz	030-1	30-40 MHz	030-2
35-40 MHz	035-1	40-50 MHz	040-2
40-50 MHz	040-1	50-60 MHz	050-2
50-60 MHz	050-1	60-80 MHz	060-2
60-80 MHz	060-1	80-95 MHz	080-2
80-95 MHz	080-1	95-150 MHz	095-2
95-125 MHz	095-1	150-250 MHz	150-2
110-160 MHz	110-1	200-300 MHz	200-2
150-250 MHz	150-1	250-450 MHz	250-2
200-300 MHz	200-1	400-850 MHz	400-2
275-450 MHz	275-1	800-1000 MHz	801-2
425-850 MHz	425-1		
800-1000 MHz	801-1		

## BIRD Variable RF Signal Samplers

Provide stand alone wide-range, THRULINE® RF coupling probes for spectrum analysis, RF signal observation on a scope, or frequency counting and control.



See Price List for BIRD accessory pricing

## Affordable... RF Applications, Inc. High Performance & High Quality RF Power Measurement Systems



## P-3000 HF Power & VSWR Indicator

Microprocessor based for fast, accurate Power and VSWR readings from 1.8-30MHz and 15 to 2950 watts, without adjustments or calibration. Three separate instruments in one: Peak Digital Power Display, VSWR Display with Alarms and 10-LED Instantaneous Power Bargraph. During high VSWR conditions a relay contact can interrupt the control line to linear amplifier to reduce the chance of damage. Separate remote directional coupler may be located up to 6 ft. away. 50Ω input/output, SO-239 connectors. Requires 12V DC @ 250mA. Display: 6 1/2"wx 5 1/4"wx 2 1/4"d; Coupler: 4 1/2"wx 3 3/4"hx 2 1/4"d, 6 lbs total ..... **\$299<sup>95</sup>**



## P-2000A RF Power & VSWR Indicator

For HF applications from 1.8 to 30MHz and up to 2000W RF output. It has an adjustable meter response time and uses the same remote coupler as the P-3000 unit. An adjustable VSWR setting and a relay are provided that can be used to disable an amplifier under high VSWR conditions. Display: 8"wx4 1/4"hx2 1/4"d; Coupler: 4 1/2"wx3 3/4"hx2 1/4"d .... **\$299<sup>95</sup>**



## Match Alert™ VSWR Monitor & Alarm

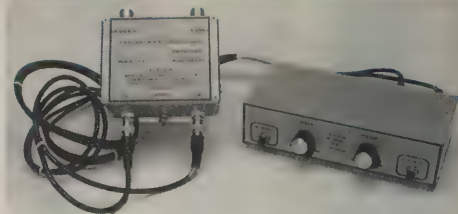
Protection for HF transmitting systems! A microprocessor monitors antenna VSWR and provides a fast visual and electrical alarm if any of eight different dip-switch selectable VSWR presets are exceeded. Covers 1.8-30MHz and is rated at 3000W. A relay contact is available via a 3 ft. cable for millisecond control of an external function such as shutting down an amplifier, etc. Cast aluminum enclosure, PL-259 connectors, requires 11-16V DC. PL-259 connectors... **\$129<sup>95</sup>**



**DIAMOND**  
ANTENNA  
SWR/Power Meters

Five models, measure Power & SWR with 5-10% of full scale accuracy. Illuminated meter, sensor switch & LED indicator. Power ratings listed below are for intermittent operation. For continuous mode (CW, FM, etc.), ratings vary with frequency. All have SO-239 connectors, except the SX-1000 which has a type-N. The SX-600 and SX-1000 are dual-band. 12VDC is required for displays. 6"wx2 1/2"hx4" d, 2 lbs.

**SX-100** 1.6-60MHz, 30/300/3kW ranges **\$149<sup>95</sup>**  
**SX-200** 1.8-200MHz, 5/20/200 ranges ..... **109<sup>95</sup>**  
**SX-400** 140-525MHz, 5/20/200W ranges... **129<sup>95</sup>**  
**SX-600** 1.8-160MHz and 140-525MHz, 5/20/200W ranges ..... **179<sup>95</sup>**  
**SX-1000** 1.8-160MHz and 430-1300MHz, 5/20/200W ranges ..... **249<sup>95</sup>**



## P-2000CW RF Power/VSWR Indicator

Employs technology developed for the company's other unique digital wattmeters, but uses an audible Morse Code interface to report the values of forward and reflected power. These values are stored during and at the end of each transmission and can be reported via CW while on the air or after the transmission. If the VSWR exceeds a preset value, the operator is alerted with the Morse" V" character, and a relay can provide control to disable a power amplifier, etc. Covers 1.8 to 30 MHz, indicates 5 to 2000W Power and VSWR level. 12V DC. Display: 8"wx 4"hx 2"d. Remote Coupler: 4 1/2"wx 3 3/4"hx 2 1/4"d, 4 lbs ..... **\$249<sup>95</sup>**

## P-1500 Digital RF Power & V.S.W.R. Indicator

Covers 1.8 -30MHz, rated at 1.5kW continuous. Built-in coupler. 4-digit LED display, autoranging bargraph. VSWR status lights. 12VDC/100mA 4"wx3 1/2"hx4"d, 4 lbs .. **\$219<sup>95</sup>**



## DC Adapters

**P-3000-P** 12V adapter for P-3000, P-2000A

& P-2000CW ..... **\$12<sup>95</sup>**

**P-1500-P** 12V adapter for P-1500 ..... **\$16<sup>95</sup>**

## Information Direct:

[www.rfapps.com](http://www.rfapps.com)

## MIRAGE SWR/Power Meters



Four models, all measure RMS and peak forward and reverse power and SWR, directly. Negligible insertion loss. Removable coupler, SO-239 connectors. Requires 9V battery, 9 to 13.6V DC, or AC adapter. Low battery indicator. 5 1/4"hx4 1/2"wx5 1/4"d, 3 1/2 lbs.

**MP-1** 1.8-30 MHz; 25, 200, 2kW ranges ... **\$219<sup>95</sup>**

**MP-2** 50-200MHz; 50, 500, 1.5kW ranges . **219<sup>95</sup>**

**MP-3** 425-450MHz; 5, 50, 150W ranges .... **249<sup>95</sup>**

**MP-4** 1260-1300MHz; 1, 10, 100W ranges **259<sup>95</sup>**

Toll Free:

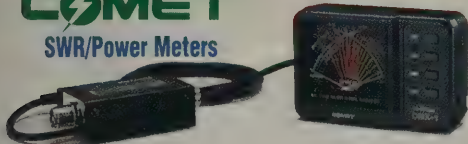
**1-800-558-0411**

e-mail: [help@aesham.com](mailto:help@aesham.com)

Internet: [www.aesham.com](http://www.aesham.com)



## COMET SWR/Power Meters

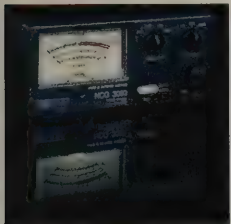


Three models, with separate meter and RF sensor with 6 ft. long cable. Lighted, cross-needle meter with three selectable power ranges, shows forward and reflected power, and SWR simultaneously, plus indicates DC voltage from power source. 50Ω, 12VDC. 4 1/2"wx3 1/2"hx1 1/2"d, 1 lb, 4 oz.

**CMX-1** 1.8–60MHz; 30, 300, 2kW ranges.. **\$189<sup>95</sup>**

**CMX-2** 1.8–200MHz; 20, 50, 200W ranges. **179<sup>95</sup>**

**CMX-3** 140–525MHz; 20, 50, 200W ranges **169<sup>95</sup>**



### NCG-3000 Bench SWR & Power Meter.

Covers 118 to 530MHz. Large illuminated meter, 5W/20W/200W ranges. Average and PEP readings. Requires 12V DC 7 1/2"wx3 1/2"hx4 1/4"d, 2 lbs .... **\$99<sup>95</sup>**

More Comet & NCG meters – see Price List

## VECTRONICS SWR & Power Meters

**PM-30HF** Similar to shown. RMS or PEP forward and reflected power and SWR simultaneously. Illuminated cross-needle meter. 1.8–60MHz, 300 & 3000 watt ranges. 5 1/2"wx3 1/2"hx5 1/2"d, 1.2 lbs **\$79<sup>95</sup>**

**PM-30UV** (shown) Same features as HF but covers 144, 220 and 450MHz bands..... **\$89<sup>95</sup>**



## VANCO Low Cost Meters



### SWR-1

#### Field strength/SWR meter

Range: 3.5–150MHz; Impedance: 52Ω; SWR: 1:1–3:1; Accuracy: 55%; Meter Sensitivity: 300uA; Antenna: 5" whip; 6"h x 2"w x 2 1/2"d, 14 oz.. **\$19<sup>95</sup>**

### SWR-2

#### SWR/Power meter

Range: 1.7 to 150MHz; Impedance: 50–52Ω; SWR: 1:1–3:1; RF Power: 0–10 and 0–100 watts; Accuracy: (SWR) ±5% (Power) 10%; Sensitivity: 200 uA; Size: 6"wx2"hx2"d, 14 oz. .... **\$29<sup>95</sup>**

### SWR-3

#### SWR meter

Frequency Range: 1.7 to 30MHz; Impedance: 50–52Ω; SWR: 1:1–3:1; Accuracy: ±5%; Meter Sensitivity: 300uA; Size: 2 1/2"wx3 1/2"hx3", 6 oz. **\$14<sup>95</sup>**

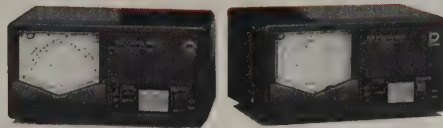
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and ask to be added to the list.



## DAIWA



### CN-101

#### Cross-Needle Power/SWR Meter (left)

Covers 1.8–150MHz, rated at 1500W from 1.8 to 60MHz & 1000W at 144MHz. 15/150/1500W RMS or PEP power ranges. Cross-needle meter indicates forward/reverse power and VSWR simultaneously. at ±10% full scale accuracy. SO-239 connectors. 6"wx3"hx3 1/2"d, 1 1/2 lbs ..... **\$89<sup>95</sup>**

### CN-103M

#### Cross-Needle Power/SWR Meter (right)

Same as CN-101, except covers 140 to 525MHz and has 20/200 watt meter ranges ..... **\$99<sup>95</sup>**



### DP-830 Digital Power/SWR Meter

Covers 1.8–150 and 149–525MHz. Fully automatic! Large LCD indicates forward RMS

or PEP power, & SWR by digits and bargraph, simultaneously. Power rating: 1.5KW from 1.8–150MHz & 150W from 140–525MHz. SWR beep tones, clock displays 4 different times, type-N connectors. 5 1/2"wx2 1/2"hx4 1/2"d, 2 1/2 lbs. .... **\$319<sup>95</sup>**

### DP-820

#### Digital SWR Meter

Same as DP-830, except covers 140 to 525MHz, rated at 150W UHF. connectors... **CLOSEOUT \$249<sup>95</sup>**

### DP-810

#### Digital SWR Meter

Same as DP-830, except covers only 1.8 to 150MHz, rated at 1.5kW..... **\$229<sup>95</sup>**



### CN-410M Compact SWR & Power Meter

For mobile or base use. Covers 3.5–30MHz, rated at 150W with 15/150W forward & 50W/5W reflected power ranges. The backlit, cross-needle meter shows forward/reverse power and SWR simultaneously. SO-239 connectors, mounting bracket. 2 1/2"wx3"dx3 1/2"d, 10 oz..... **\$89<sup>95</sup>**

**CN-460M** Same features and rating as CN-410M, except the 140–450MHz ..... **\$89<sup>95</sup>**

**CN-465M** Same features as CN-410M and CN-460M, except covers 140 to 450MHz and 15/75W forward and 5/25W reflected ranges. .... **\$89<sup>95</sup>**



## YAESU SWR/Power Meters

**YS-60** Monitors Average (CW) and Peak (SSB) transmitter output, and VSWR of antenna systems. Covers 1.6–60MHz

up to 2KW with meter ranges of 20/200/2000W. 50Ω, SO-239 connectors. Requires 12V DC for meter lamps and internal operational amplifier circuits. 4 1/2"wx2 1/2"hx3 1/2"d, 1 1/2 lbs ..... **\$129<sup>95</sup>**

**YS-500** Similar to YS-60, but covers 140–525MHz, 4/20/200W ranges. 12V not required..... **\$109<sup>95</sup>**

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for clean, late model SSB & FM Gear  
Call for our Quote Today!  
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## STARTEK FREQUENCY COUNTERS

**STARTEK ATH Series Frequency Counters** are Subcompact, Pocket-size units, designed for ease of use and dependable operation. The Low Cost of these instruments belies the Quality Construction and innovative features found throughout.

**STARTEK** counters are used to find transmitting frequencies, locate RF sources, check all sorts of transmitting equipment for operation and frequency calibration. They are used with antenna analyzers for antenna tuning and to check or monitor the output frequency of transmitters, signal generators. etc.



All **ATH series** counters have High-Speed Response and the special **AUTO TRIGGER & HOLD** feature. They can display and hold the frequency of a signal in less than 1/10 second. All have two MMIC amplifiers and ultra high sensitivity – less than 1 mV over most of the range. All models have anodized aluminum cabinets with machine thread screws, auto polarity power input (9–12VDC), 6 sample times, a manual **HOLD** switch, Ni-Cad batteries and 110 VAC adapter. Made in USA.

**ATH-15** 1–1500 MHz. 2 inch, 10 segment signal strength Bar Graph, low battery indicator... **\$189<sup>95</sup>**

**ATH-30** 1–2800MHz. Signal strength Bar Graph, low battery indicator, reset control & ONE-SHOT feature (single read & hold, does not allow subsequent signal to displace reading, switch selectable). .... **\$249<sup>95</sup>**

**ATH-50** 5–2800 MHz (2.8GHz). Has HIGH IMPEDANCE input (1 megohm) from 5 Hz to 50 MHz that can be used with probe without excessive circuit loading. Also Bar Graph, low battery indicator, ONE-SHOT and reset control. This compact model does more than most bench counters ..... **\$299<sup>95</sup>**

**OPTION HST** High accuracy option. ±0.2 PPM TXCO timebase, 18–40°C. Order the ATH-30/50 counters with this option.....additional **\$100<sup>00</sup>**

**BAND PASS FILTERS** Four filters available to extend readability distance: **LP-60** DC–60MHz; **BP-150** 130–500MHz; **HP-400** 400–1500MHz; **HP-800** 800–2000MHz .....each **\$49<sup>95</sup>**

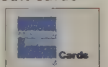


**STARTEK ACCESSORIES** - include a Zipper Case, various antennas, probes, Band Pass Filters, vehicle power adapter, etc. See Price list for complete listing.

For more technical info:

**STARTEK Help Line: (954) 537-5577**

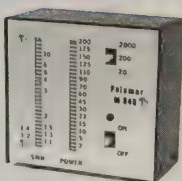
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## M-840 SWR & Power Meter

Two 30-segment LED displays show PEP or average power & SWR instantaneously and simultaneously, without calibration - just select the proper power range. Covers 1 to 30MHz with 2, 20, 200 and 2000 watt power ranges. Shows VSWR 1.0 to 10:1+. Remote sensor with 6 ft. cable. Requires 10-15 VDC @ 800ma. 4 1/4" w x 4 1/4" h x 2 1/2" d, 1 lb. .... **\$189<sup>95</sup>**



## RX-100 Noise Bridge

Just one measurement tells if your antenna is resonant, and if not, whether it is too long or too short. Shows resistance and reactance of coax fed antennas in the 1-100MHz range. Installs between receiver and feedline. Just tune receiver to frequency, adjust controls for a noise null and interpret the readings according to instructions. Useful for off-the-air tune-up of transmitters & tuners, and to adjust tuned circuit resonance. Uses 9V battery. 5 1/4" w x 3" d x 1 1/4" h .... **\$89<sup>95</sup>**



## SB-4 Balun

Matches 50Ω unbalanced coaxial cable to 200Ω balanced line. For high SWR applications in multi-band dipoles, tuners and open wire line to coax transformations. Covers 1.7-30MHz, rated for 6KW PEP or 2KW CW up to a 10:1 SWR. Teflon insulation, epoxy encapsulated, stainless steel eyebolt on the top for support. 4" dia. x 4" high, 2 lbs .... **\$89<sup>95</sup>**



## P-508 Active Preselector

Installs between receiver and antenna system. Covers 200kHz-30MHz range. High-Q tuned circuits reduce or eliminate interfering signals on shortwave bands. New FET-Bipolar amplifier provides over 20dB gain & tolerates strong local signals without overload better than older dual-gate technology. 9 to 15V DC. SO-239 connectors. 2 1/2" h x 7 1/4" w x 2 1/2" d, 0.8 lb .... **\$99<sup>95</sup>**



## MLB-1 500kHz to 30MHz Magnetic Longwire Balun™

For SWL's using longwire antennas. Allows use of coaxial cable between the antenna and the radio. Matches antenna to coax for increased signal strength and lower noise pick-up. .... **CLOSEOUT \$39<sup>95</sup>**



## LA-1 Loop Antenna

Picks up less noise than other antennas. Six plug-in loops for various frequency ranges VLF to 15MHz, rotate and tilt to produce sharp nulls that cancel interference and noise. Built-in 20dB preamp compensates for size. 2 1/4" h x 7 1/4" w x 6" d. .... **\$99<sup>95</sup>**



## Plug-in Loops

For 40-150kHz, 150 to 550kHz, 550 to 1600kHz, 1.6 to 5MHz or 5 to 15MHz ..... each **\$99<sup>95</sup>**

## VLF Converters

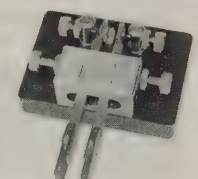
Receives and converts the 10 to 500kHz Very Low Frequency band to 80 meters. Two models tune this low range on a General Coverage receiver or Ham Band transceiver. Powered by a 9V battery. 2" h x 4 1/4" w x 5" d.

**VLF-A** Use with a Ham Band transceiver ..... **\$89<sup>95</sup>**

**VLF-S** Use with a General Coverage receiver .. **\$89<sup>95</sup>**

## PK-200B All Brass Dual Paddle Iambic Key

Made by Jones of England. Smooth, solid iambic action. Adjustable spring tension, paddle height and spacing. Gold-plated contacts, serial# ..... **\$209<sup>95</sup>**

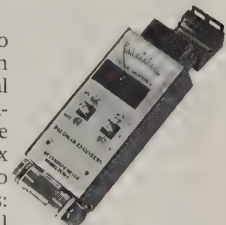


## PK-203 All Brass Single Paddle Key

Similar to the PK-200B but uses a single paddle for non-iambic operation. .... **\$219<sup>95</sup>**

## PCM-1 RF Current Meter

Measures RF current, 1 to 30MHz. Clamp-on design allows you to check: Radial systems to find broken radials; Antenna and feedline currents; Currents on coax shields and any wire up to 1/2" diameter. Three Ranges: 100ma, 1 Amp & 5 Amp full scale. Handheld, 9V battery operated for use right at your antenna. 6" w x 2" h x 2" d, 9 oz. .... **\$129<sup>95</sup>**



## PT-340 Tuner-Tuner

Eliminate QRM, overheated final tubes and devices by adjusting your station antenna tuner without transmitting. Installs permanently between rig and antenna tuner. Turn it on, and listen to the noise output in your receiver, adjust your station tuner for a dip in the noise (null). Covers 1.7 to 30MHz. Uses 9V battery. 6" w x 5" h x 3" d. .... **\$99<sup>95</sup>**



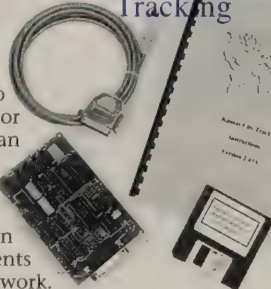
Not Pictured

**FER-2** RF Ferrite Toroid kit ..... **\$20<sup>95</sup>**

**RFI-3** RF Interference kit ..... **\$20<sup>95</sup>**

## GRACE

## Kansas City Tracker Automatic Satellite Tracking



The Kansas City Tracker when used in conjunction with a satellite tracking program, such as *InstantTrack*, can read the azimuth & elevation information generated by this software, and keep an antenna array pointed at the satellite during a pass.

The Kansas City Tracker/Tuner is an 8 bit PC board which will operate in an open ISA slot, in IBM Compatible computers, ranging from XT's to Pentium systems. It does not use any hardware interrupts or COM ports. It has its own DB25 type port, which is used to connect to both a rotor controller and either a dual band radio or two single band radios. An 8 foot cable is provided, with a DB25 connector on one end, and an 8 pin Din connector on the other. This cable can be used as is, to connect to a YAESU/KENPRO 5400/5600 rotor controller, or it can be modified, using instructions provided, for other types of controllers.

The Kansas City Tuner option consists of additional components on the KCT board and cannot be added after purchase. These components allow for Doppler compensation, primarily for digital satellite work. Instructions are provided for connecting a user supplied cable to the DB25 end of the KCT cable, for interfacing to either the serial port or mic-click input of the radio. This requires the use of an additional satellite tracking program such as *Quiktrak* or *WiSP*. There is no need to purchase a TTL to RS232 converter for your radio. The KCT can be switched to either type of output.

Kansas City Tracker **\$229<sup>95</sup>** • Kansas City Tuner option **\$319<sup>95</sup>**

Toll Free:

**1-800-558-0411**

e-mail: [help@aesham.com](mailto:help@aesham.com)

Internet: [www.aesham.com](http://www.aesham.com)

# PREMIER communication

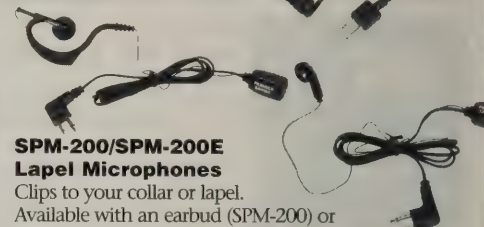
## SPM-100 Speaker Microphone

Full-sized electret speaker m. Convenient revolving lap clip. .... **\$27<sup>95</sup>**



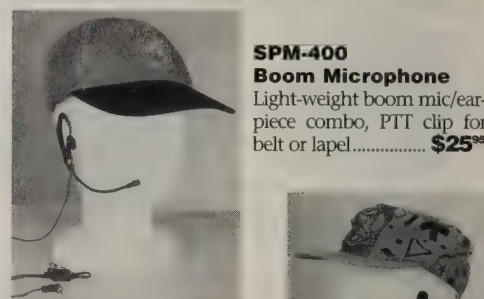
## SPM-300 Deluxe Speaker Microphone

Locking PTT, built-in volume control. Lighted transmit indicator. .... **\$34<sup>95</sup>**



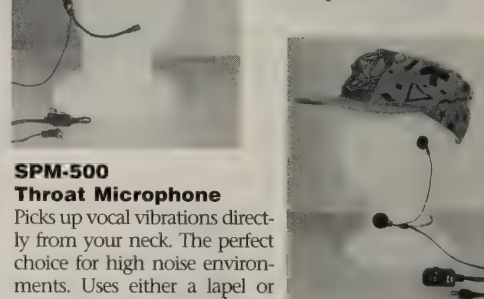
## SPM-200/SPM-200E Lapel Microphones

Clips to your collar or lapel. Available with an earbud (SPM-200) or earhook (SPM-200E) ..... **\$18<sup>95</sup> / \$21<sup>95</sup>**



## SPM-400 Boom Microphone

Light-weight boom mic/earpiece combo, PTT clip for belt or lapel. .... **\$25<sup>95</sup>**



## SPM-500 Throat Microphone

Picks up vocal vibrations directly from your neck. The perfect choice for high noise environments. Uses either a lapel or "fingertip" PTT ..... **\$59<sup>95</sup>**



RD-78 RD-8 RD-98 RD-9 AL-800

**RD-9** 7" tall "thin whip", VHF/UHF dualband ..... **\$18<sup>95</sup>**

**RD-98** 17" tall "thin whip", 2.15 dBi gain on Two Meters 3.2 dBi gain on 70 Centimeters ..... **\$24<sup>95</sup>**

**RD-8** 6.5" tall rubber duck, VHF/UHF dualband ..... **\$17<sup>95</sup>**

**RD-78** 15" tall rubber duck, 2.15 dBi gain on VHF, 3.2 dBi gain on UHF ..... **\$22<sup>95</sup>**

**AL-800** 2-in-1 antenna: 34" telescoping whip which collapses to 10"; 8" "rat tail" antenna. 3.2 dBi gain on VHF, 5.5 dBi gain on UHF. .... **\$34<sup>95</sup>**



# AT-600 COMPLETE DUALBAND PERFORMANCE

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*The best value in amateur radio.*

*All of the features you want,  
at a price anyone can afford.*

- ◆ Tx: 144 - 148 and 430 - 450 MHz
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- ◆ Crossband repeater mode
- ◆ Alphanumeric display
- ◆ CTCSS encode / decode
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- ◆ CTCSS tone scan
- ◆ Wireless cloning
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## NEW FROM ALINCO

### DJ-C1T (2 meter) and DJ-C4T (70 cm) Mini HTs

About the size of a credit card, less than 1/2 inch thick, full 2 meter or 440 band coverage, 300 mw output, 20 memory channels and a lithium-ion battery that can go 100 hours between charges! CTCSS tone encode, "snap-in" 2 hour battery charger, earphone, soft case and auxiliary "pocket" antenna included at no extra cost. DJ-C1T includes extended receive, 118~174 MHz, including Aircraft (AM) band. DJ-C4T covers the full 70cm band, 420~449.995MHz, TX and RX! These are "breakthrough" radios at a low Alinco price!



### NEW DJ-S11T 2 Meter Pocket Radio

**It's the one you asked for!** Full 2 Meter coverage (144 ~ 148 MHz), 21 memories, CTCSS encode, self-storing telescoping antenna, accepts speaker mic and outside power, runs on 3 AA batteries, even has MARS/CAP capability. Get all this and more at a great price!



### DJ-S41T 70 cm Pocket Radio

Already a "best seller," the DJ-S41T covers 425 ~ 450 MHz, has 21 memories, CTCSS encode, self-storing pivot antenna, accepts a wide range of accessories. Perfect for use with repeaters, simplex or cross band links. Priced low, so every ham in the family can own one!

Permits required for MARS/CAP use. Performance specifications only apply to amateur bands. Specifications subject to change without notice or obligation.

### DR-605T(Q) 2 Meter + 70 cm Mobile/Base

The reviews are in and the DR-605T is a winner!

Work repeaters, simplex, cross-band, even satellites. 102 memories, CTCSS, built-in antenna duplexer, MARS/CAP capability, clone function, 9600 packet port and more at a price so low, it's hard to believe.



### DR-140T(Q) 2 Meter Mobile/Base

A new full-featured radio with 51 memory channels, alphanumeric display (up to 7 characters), extended VHF receive plus (AM) aircraft, CTCSS + European Tone Bursts, MARS/CAP capability, clean design, scanning and cloning functions, all at a very low Alinco price.



### HF+6 Meter DX-70 TH and DX-70T

Choose your preference in output power on 6 meters. The DX-70TH transmits up to 100 watts on all Amateur Bands, 160 ~ 6 Meters; the economical DX-70T is 100 watts on HF, 10 watts out on 6. With either radio you get General Coverage Receiver (150 KHz ~ 30 MHz and 50 ~ 54 MHz), face plate that can be remote mounted, built in narrow filter and speech processor, full QSK, semi or automatic break-in, multi-function control and more. Be sure to check out the EDX-2 Automatic Antenna Tuner.



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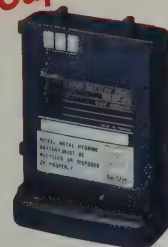
## NiMH BATTERY PACKS & CHARGERS

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Spring Loaded Clip included!



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T7A/Z1A/T22A/W31/W32  
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**MH-101 series NiMH/NiCd rapid smart chargers** for popular radios!

## POWER AMPLIFIERS



Maha's new **docking boosters** are the affordable solution to your weak signal problems. The MH-A300 series docking booster utilizes a compact amplifier, and with the appropriate adapter, you will boost the 5 watt output power of your handheld to the higher output power of a more expensive mobile radio while maintaining the portability of your handheld. You can instantly switch from a powerful mobile radio to a portable handheld with ease! Put your radio on Maha's new MH-A300 series docking booster and see what it can do for you!

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For Alinco/Icom/Standard Yaesu

**MH-800K:**  
For Kenwood

**MH-800Y:**  
Works with FT-50R & VX-1R !!

You are looking at the best speaker/microphone in the industry. The MH-800 series consists a **Super 500mW Speaker**, and a crystal clear microphone. It can sound as good as your rig! Put the Maha MH-800 series speaker/mike on your handheld and experience the difference!

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- ✓ Adjustable Pre-Amp
- ✓ Output Indicator, and more....
- ✓ FM/SSB/CW All Mode!!

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- MH-A102:** 2m/35W @ 5W Pre-Amp, SSB/FM
- MH-A103:** 2m/50W @ 5W Pre-Amp, SSB/FM
- MH-A201:** 2m/70cm 45/35W @ 5W
- MH-A301:** 2m/50W @ 5W Pre-Amp
- MH-A302:** 2m/70cm 45/35W @ 5W

**NEW! PRO!**

**Also Available**

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Try the new Maha VOX and feel the difference with the **new reduced price!!**

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**MH-VOX-S**  
For Alinco/Icom/Standard Yaesu

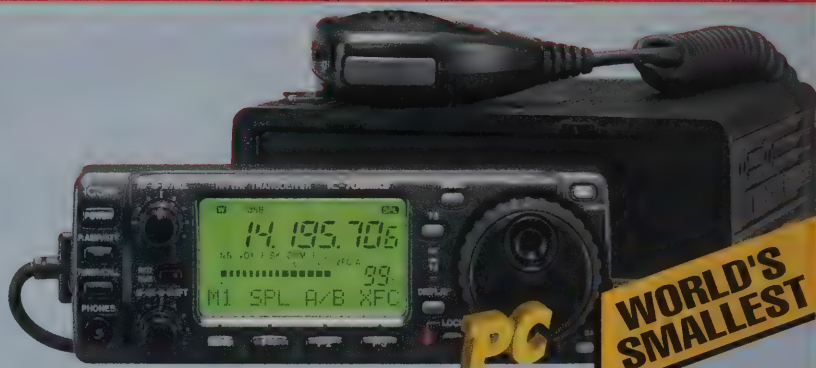
**MH-VOX-K**  
For Kenwood

**MH-VOX-M**  
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**IC-707** Extra Class Performance at a Novice Price  
 • 100 W (AM 25 W) • All Mode • Simple to Use! Big, Well Spaced Keys and Dials, and a Large Backlit LCD Display • 500 kHz–30.0 MHz General Coverage Receiver • Minimum Number of Keys • Front Facing Speaker • Large Display • Rugged Construction, Compact Size — Great for Mobile Operation • 100% Continuous Duty Cycle • 32 Memory Channels • PC Programmable • 13.8 V DC • **ICOM's Most Affordable HF** • 9.5"(W), 3.7"(H), 9.4"(D), 9.1 lb



**WORLD'S SMALLEST**

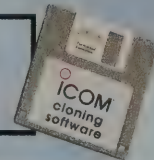
**IC-706MKII** HF + 6M + 2M, All Mode  
 — Easy to Use as a Base or Mobile Rig & Still the World's Smallest HF —  
 • HF+6M (100 W) SSB/CW/AM/FM/RTTY • IMPROVED: 2M (20 W) SSB/CW/FM/WFM/RTTY, Slots for 2 Optional Crystal Filters, Optional Tone Squelch, Enhanced 0.03 — 200 MHz Broadband All Mode Receive, Sub Dial for Easier Access to RIT/Second VFO, Individual Band Change Key, Crossband Split, Large Speaker, Quiet Cooling Fan, and Much More • SSB/CW/AM Narrow Filter Options • 101 Alphanumeric Memories • Noise Blanker • IF Shift • Preamp/Attenuator • CW Keyer • CW Pitch Control • Full Break-In (QSK) • Speech Processor • VOX • LCD Display with 1 Hz Readout • Easy-to-Use Menu System • Tone Encode Built-In • 2 Antenna Connectors • Voice Synthesizer (opt. UT-102) • Detachable Control Panel\*\* • 6.6"(W), 2.3"(H), 7.9"(D), 5.5 lb

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Watch a Working Demo on Video at AES

Let John Dunker, W9UR, take you on a working tour of the IC-756. Great for both beginner and experienced HF'ers.

## With ICOM PC Programming



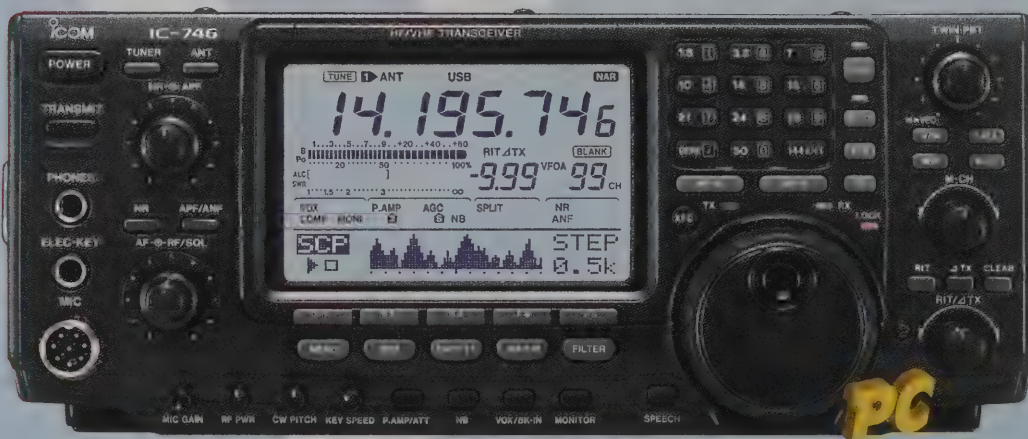
**GREAT LOW PRICE**

**IC-756** HF+6M, IF-DSP and TRUE Dual Watch

• 4.9" Concentrated Information LCD Dot Matrix Display with Spectrum Scope, Alphanumeric Memories and Soft Key Buttons • 100 W Stable Output Power (40 W AM) • SSB/AM/FM/CW/RTTY • Automatic Antenna Tuner with Preset 100 kHz Steps — RX and TX • Quadruple Conversion Superheterodyne • 101 Memory Channels • Auto DSP Controlled Notch Filter • Noise Reduction • PSN Modulation • Selectable Audio Peak Filter • Twin Pass Band Tuning • Power MOS FET's • New High Performance Memory Keyer • PC Programmable with CI-V Capability • 12 V Operation • Speech Synthesizer • **Very Affordable** • 13.4"(W), 4.4"(H), 11.2"(D), 23.1 lb



**IC-775DSP** Pull Out Signals No Analog Rig Can • IF-DSP (Digital Signal Processing) TX/RX • 200 W Stable Output Power • SSB/AM/FM/XCW/RTTY • Built-In Heavy Duty Power Supply & Auto Antenna Tuner • Auto IF Notch Filter • Adjustable DSP Noise Reduction • Level/Width Variable Noise Blanker • PSN Modulation • Audio Peak Filter • Dual Watch • Twin Tuning Knobs • Twin Pass Band Tuning • Front Panel Control Dual Antenna System • Power MOS FET's • CW Pitch Control • Electronic & Memory Keyer • Front & Back CW Keying Jacks • 1 Hz Tuning & Display • 99 Memory Channels • Selectable Pre-Amp & RF Attenuator Levels • Built-In CTCSS Tone Encoder • VOX • Noise Blanker with Adjustable Level & Width • AGC with Adjustable Time Constant • 16.7"(W), 5.9"(H), 15.4"(D), 36.8 lb



**NEW IC-746\*** HF/6M/2M  
 100 Watts on All Bands, Including 2 Meters • AF-DSP • Built-In Antenna Tuner • Twin Passband Tuning • **Call or Visit AES for More Details** • 11.3"(W), 4.7"(H), 12.5"(D), 19.5 lb

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**IC-T22A/IC-T42A** (2M/440 MHz) Single Bander • Fun, Shirt Pocket Small and Easy to Use! • Large Alphanumeric Display • Wide Receive Coverage, Including Airband • 5 W @ 13.5 V (3 W Out of Box) • Air Band Receive • 80 Memory Channels (40 w/Alpha Display) • 2.3"(W), 4.3"(H), 1.1"(D), 10.9 oz



**IC-T7AHP** 2 Meter/440 MHz Dual Bander • Dual Bands at a Single Bander Size & Price! • Very Easy to Use—No Function Key • Works One Band at a Time, Switch Between Bands with One Touch of the Band Key • Now 4 W (2M)/3 W (440) Out of the Box with BP-173 • "Intuitive" Help Display • CTCSS Encode/Decode • **Very Affordable** • 2.5"(W), 4.8"(H), 1.1"(D), 11.3 oz



**IC-W32A** 2 Meter/440 MHz Dual Bander • 5 W Out of the Box • No Function Key • PC Programmable • 200 Memories with Alphanumeric Display, Messaging & Paging • "Intuitive" Help Display • Backlit Display and Keypad • Wide Band RX (Including Air Band) • V/V, V/U, U/U Operation with VHF/UHF Tuning Knob Exchange • Encode/Decode • PC/Radio-to-Radio Cloning • 2.2"(W), 4.9"(H), 1.2"(D), 12.0 oz



**IC-T2A** 2 Meter Single Bander • 4.5 W • Rugged Aluminum Chassis & Polycarbonate Case • Built-In Tone Squelch with Pocket Beep and Tone Scan • 8 Programmable Keys • 43 Memory Channels • Uses 8 "AA" Ni-Cd (included) or Alkaline Batteries • **ICOM's Most Affordable** • 2.3"(W), 5.5"(H), 1.3"(D), 10.9 oz



**IC-821H** 2M/440 MHz Advanced Satellite & Digital Base Station • All Modes • Easy to Use!

• Continuous Adjustable Transmit Power • Sub Band Transmit • 9600 Full Compatibility Out of the Box • 160 Memories • Noise Blanker & IF Shift on Main & Sub Bands (independent main/sub RX) • Built-In Electronic Keyer • Satellite Tracking with Doppler Correction • Compact! 9.5"(W), 3.7"(H), 9.4"(D), 11.0 lb  
"By far the easiest to use satellite radio on the market today. In less than 10 minutes after unpacking the 821H, I was on the air at 9600 baud with KO-23" — Michael Wyrick, N4USI, AO-27 Control Operator

**No-Code Techs**  
Work the NEW AMSAT  
Phase 3-D Satellite  
(under construction)



**IC-207H** 2M/440 MHz Dual Bander • 2M(45W)/440 MHz(35W) • Super Compact Detachable Control Panel\*\* with Big Keys, Big Knobs and a Big Display • Work One Band at a Time • 9600 Baud Ready • Wide Band RX (Includes Airband) • CTCSS Encode/Decode • **Very Affordable** • 5.5"(W), 1.6"(H), 8.1"(D), 2.6 lb

**IC-2710H** 2M/440 MHz Advanced Dual Bander • 2M (50 W)/440 MHz (35 W) • Detachable Control Panel\*\* • Fast Scanning • 220 Memory Channels • PC Programmable • CTCSS Encode (decode optional) • RF Attenuator • 8 DTMF Memory Switches • V/V, U/U Simultaneous Rx • Built-In Duplexer • 3 Selectable Power Levels: 50(35), 10, 5 • 5.5"(W), 1.6"(H), 8.4"(D), 3.1 lb

**IC-2000H** 2M Intermod Fighter • Wide Band RX (118–174 MHz) • Highly Intermod Resistant • 50 W of Power • 50 Memory Channels with Alphanumeric Display • AM Aircraft Rx • Full/Program Scan • **ICOM's Most Affordable Mobile** • 5.9"(W), 2.0"(H), 5.9"(D), 2.4 lb



**NEW LOW PRICE**



**Optional Infrared Wireless Mic**  
Works with both the new IC-207H\*\* and the more advanced IC-2710H.  
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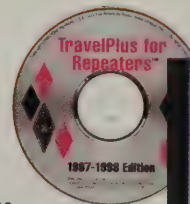
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# Look on the brighter side of handhelds

**Kenwood's new TH-G71A dual-bander (144MHz/440MHz), with its distinctive illuminated keypad and 6 watts of power, has what it takes to shine in any situation.**



## TH-G71A 144/440/MHz FM DUAL BANDER

If you're looking for a compact dual-bander with all the right features, yet without the price tag that usually goes with high performance, there's no better choice than the TH-G71A.

Just hold it in your hand and it's immediately clear how well our new handheld transceiver is engineered. The ergonomic design, **illuminated keys** and **backlit display** all combine to make operation a breeze. As does the menu mode, which allows you to customize the TH-G71A by adjusting all major settings to your choice. Besides being easy to use, it also boasts extraordinary power – up to 6 watts (VHF) or 5.5 watts (UHF) of RF output (selectable) with its **high-performance antenna**. The speaker provides **powerful, refreshingly clear audio**.

Of course, power is only part of the picture. Features count. And you can count on the TH-G71A to offer what you'd only expect to find in far more expensive HTs. There are **200 memory channels** – allowing you to store transmit and receive frequencies independently. Memory data can even be edited and stored on your PC. Multiple scan functions are available, including programmable band scan, memory scan with memory channel lock-out, MHz scan and call scan. For each band there are TO (time-operated), CO (carrier-operated) and seek scan resume modes. With the Memory Name

function you can choose to identify each channel with up to **6 alphanumeric characters**. DTMF memory and CTCSS tone encode/decode are provided.

The TH-G71A also scores well for stamina and reliability, boasting long battery life – thanks to a variety of power-saving features – and **MIL-STD 810E** compliance for rain & shock resistance. So there's no need to go easy on this dual-bander. It's built better and brighter in every way.

- 6W (VHF), 5.5W (UHF) at 13.8V DC
- PC programmable
- 200 memory ch. with alphanumeric display
- MIL-STD 810E (rain & shock)
- CTCSS tone scan
- Wide-range coverage (incl. aircraft receive)\*
- DTMF memory (10 ch. up to 16 digits)
- Multiple scan modes
- Key illumination
- High-performance antenna
- HI/LOW/EL power output selectable
- TM-V7A remote control (DTMF remote)

\* Specifications are guaranteed for Amateur Bands only



ISO 9001  
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97ARD-1676-SCV

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Kenwood News & Products  
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# The Cool New Look in Mobile Communications.

Kenwood's new TM-V7A FM dual-band (144MHz/440MHz) transceiver with its cool-blue reversible LCD heralds a new age in ergonomic design. What's more, the TM-V7A boasts advanced features that make mobile communications as sharp as the cool-blue look.



## TM-V7A Dual Band Transceiver

If the TM-V7A could do any more for you as a mobile radio, it would be holding a conversation with you. From the **blue positive/negative display modes** that optimize lighting conditions, to the multi-dimensional **Five-in-one programmable memory system** that stores five different operating profiles, the TM-V7A incorporates a comprehensive intelligence that will bring you an entirely new mobile operating experience.

A world first **blue LCD front panel** utilizes a dot-matrix format for crisp, high-resolution information display in either positive (white background/blue characters) or negative (blue background/white characters) modes to suit ambient lighting conditions.

The 'Five-in-one' user interface memory system allows you to configure five unique 'personalities' into the TM-V7A to suit various operating requirements, and access them at the push of a button. Each 'personality' program includes positive/negative display mode, dimmer level, frequency range and memory mode—great for families who use the same radio.

This user interface provides access to a set of features with extraordinary range and depth. You have up to **280 multi-function memory positions** that each store TX/RX frequencies, frequency step, and DTSS (Dual-Tone Squelch System) or CTCSS (Continuous Tone Coded Squelch System) tone frequency. If you use the **Memory Name func-**

**tion** to store each memory with a full alphanumeric identifier, there are up to 180 channels available. You can receive two frequencies simultaneously on the same band (VxV or UxU) or split across both bands, and cruise the frequencies with a powerful new scanning system that provides a **visual graph** of the frequency band activity. The **Auto-simplex checker** (ASC) function can also automatically sense if you can switch from a repeater to simplex operation.

All of these advanced features are combined with Kenwood's unmatched **AIP (Advanced Intercept Point)** circuitry for excellent selectivity and sensitivity. The **mini-DIN plug** for 1200/9600 bps data transmission will allow you to operate voice and data at the same time, a Kenwood exclusive. The compact, **quick-release front panel** for remote positioning and **commercial-grade design with heavy duty heatsink and rugged construction** make the TM-V7A the ultimate choice for mobile communication.

### OTHER FEATURES:

- **Full band scan, program band scan, memory scan with channel lock-out, MHz scan and call scan with TO (time operated) or CO (carrier operated) resume modes**

- **Automatic band change**
- **Selectable frequency step (5, 6.25, 10, 12.5, 15, 20, 25 or 50 kHz)**
- **Wireless remote control function**
- **Voice synthesizer (requires VS-3 option)**
- **Separate speaker terminals for each band**
- **Supplied MC53DM multi-function backlit microphone with DTMF**
- **Cross band repeater function**
- **Guide functions**
- **Built-in duplexer**
- **Built-in CTCSS encode and decode**
- **CTCSS tone scan**
- **APRS™ ready**
- **10 DTMF memory (16 digits)**



ISO 9001  
JQA-1205

**KENWOOD**  
Amateur Radio Products Group

97ARD-1686 AES

KENWOOD COMMUNICATIONS CORPORATION

AMATEUR RADIO PRODUCTS GROUP  
P.O. Box 22745, 2201 E. Dominguez Street  
Long Beach, California 90801-5745, U.S.A.

Customer Support/Brochures (310) 639-5300

**INTERNET**

Kenwood News & Products  
<http://www.kenwood.net>  
Kenwood Bulletins  
<ftp://ftp.kenwood.net>



# DSP solution with easy operation.

Kenwood's TS-570D/S HF Transceiver gives you high-end digital performance in an easy-to-use package for any home, mobile or DX-pedition.



## TS-570D HF TRANSCEIVER TS-570S HF + 6M TRANSCEIVER

Cruise the upper reaches of elegant HF performance in a compact, affordable transceiver incorporating advanced **AF-stage DSP** for crystal-clear TX and RX audio, digital filtering for sophisticated signal isolation and extraction, **Central Frequency Control System** for high stability, and a full range of enhanced operator features.

The DSP filters and extracts signals utilizing computer algorithms that would be impossible to match with standard analog circuits. The DSP also provides **CD-class transmit and receive audio quality** that can be shaped at will, and two powerful noise reduction systems: **Line Enhancer Method** for SSB/AM modes, and **Speech Processing by Auto Correlation (SPAC)** for CW mode. DSP also enables the **CW-Auto Tune** feature that automatically zero-beats CW signals.

The **Extensive Memory Functions** provide a bank of 100 memory positions split into 90 standard channels for general operation and 10 for programmable VFO, programmable scan and long-term memory. You can scroll memory contents, copy from one memory to another, and lock out specific memory channels. In addition there are **5 quick memories** for storing frequencies and modes on the fly, perfect for the busy DX contest.

The new easy-to-use **Menu System** incorporates **46 menu features** plus an **on-line guide** so you'll never have to drag your owner's manual around again. The **large amber backlit LCD display** provides 4 light levels for clear, concise operational information display under any lighting conditions.

The TS-570D/S exhibits no compromises when it comes to construction and performance. The **continuous-duty 100 watt transmitter** features a large heavy-duty heat sink with integrated cooling fan for non-stop operation even in extreme environmental conditions. The **wide-band receiver** delivers stable coverage from 500 kHz through 30 MHz with dual **pre-amps** and dual **bandpass filters** for exceptional selectivity and sensitivity.

With the features and performance of a high-end radio integrated into an affordable mobile-size package, the TS-570D/S is the perfect choice for the field or to build a full station around at home.

### OTHER FEATURES:

- Channel scan, program band scan, memory scan with channel lock-out and group channel scan, all with TO (time operated) or CO (carrier operated) resume modes

- Compact 10 5/8 inch by 3 3/4 inch front panel size for any mobile installation
- Preset auto antenna tuner with 18 sub-bands
- Variable electronic keyer with speed settings between 0 and 100 wpm
- Packet and FSK features
- RCP-2 software for PC-based display and memory configurations
- 57.6 kbps PC control option via 9-pin D-SUB and RS-232C interface
- Memory data transfer between radios (optional IF-232C required)
- Full functionality on 6M (TS-570S) including DSP, 100 watts output and preset Auto Antenna Tuner
- CW message memories
- 10-key direct frequency entry
- Optional VS-3 voice synthesizer
- Optional DRU-3A digital recording unit



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97ARD-1683 AES

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## EQUIPMENT PROTECTION

**Isobar** – the World's Most Advanced Surge Suppressors. They provide instantaneous (Ons) response to power surges. Isolated filter banks eliminate connected equipment interference "Cascade circuitry" provides increased surge protection and diagnostic LEDs.

**BC Series Battery Backup Systems** Offering complete protection against surges, line noise, brownouts and blackouts. Tripp Lite uninterruptible power supplies keep your computer & Ham Radio equipment running in an emergency. Long lasting batteries give you up to 17 minutes backup time for 486/Pentium PCs.

**BC Internet** models have RJ-11 jacks for complete Fax/Modem protection.

**Various Models** – See Tripp Lite in the Price List

## CENTAUR ELECTRONICS

### The "Cricket" Pulser

**CP-1** No more tuning-up key-down, creating heat and loading down the power supply! This user controlled, variable duty cycle station tuning instrument plugs into the station's exciter CW key jack. Proceed to tune-up in the usual manner, but then press the PULSE button on the CP-1 and adjust the duty-cycle control for a desired pulse width, normally about 10%. For best results the use of a peak-reading wattmeter is recommended. Uses 9-volt battery. 4 1/4" h x 2 1/4" w x 1 1/2" d ..... **\$67<sup>95</sup>**

### High Performance Baluns

• State-of-the Art • 0.5 – 50MHz performance with advanced toroidal transformer • 3kW SSB rated • Extended performance in hostile environments • Stainless steel hardware • Heavy-duty body materials • Military grade internal components • 3" diameter x 7"

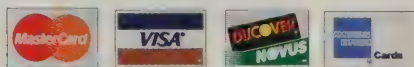
**B11W10-50** for 1:1 Dipole ..... **\$49<sup>95</sup>**  
**B11Y10-50** for 1:1 YAGI ..... **\$49<sup>95</sup>**  
**B41Y10-50** for 4:1 YAGI ..... **\$64<sup>95</sup>**  
**B41W10-50** 4:1, ladderline to coax .. **\$64<sup>95</sup>**

## GAMBER-JOHNSON

**SS-100** Convenient, avoid theft!

Radio slides in and out of mount instantly without having to attach or remove cables. The Power, Ground, Antenna, and Speaker leads connect and disconnect automatically! RF components are designed for a low SWR up to 500MHz. Adapts to most radios; the bracket adjusts to case size and can be conveniently attached above or below the radio unit..... **\$69<sup>95</sup>**

**SS-101** Extra base for multiple vehicle use **\$42<sup>95</sup>**



We accept I.M.P.A.C® Government Credit Cards



## SGC SG-2000

### COMMERCIAL GRADE HF TRANSCEIVER

A rugged HF transceiver with 150W PEP output. Modes: A3A, A3H, A3J and CW in LSB/USB, true AM in receive mode & Data. Comes programmed with 644 ITU channels & 100 user defined channels that can be set to Ham frequencies in the 1.8–30 MHz range; receives 500kHz–30MHz. Keypad control with 21 illuminated keys. Scans ITU channels & 100 memories with adjustable scan speeds & rates. Large LCD, wide-angle display, adjustable back lighting for easy viewing night or day. Operates as a single unit, or the front panel can be removed to function as a remote control head. Built-in computer control, can be controlled by any RSS-232 protocol on all Digital Modes. 12VDC @ 16A. 4 1/4" h x 10" w x 15" d, 12 lbs ..... **04-01 \$1429<sup>95</sup>**

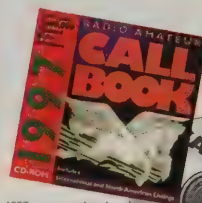


## SGC SG-7200

### DSP HF Modem with SmartEmailer™

Link to the world with this reliable and efficient DSP HF modem. Transmit and receive e-mail via common mode carrier or receive weather bulletins and forecasts anywhere around the globe. All you need is a HF radio with SITOR compatibility and your laptop computer running a general purpose communications program. The SG-7200 is designed for digital communications or as a free-standing general-purpose processor for embedded applications. It features open hardware/software architecture running DOS and Microsoft Windows applications. Works with public domain protocols or develop your own custom modem sets for advanced protocol development. It's a fully programmable and field upgradable, and has an easy to use graphical user interface. .... **56-40 695<sup>95</sup>**

More SGC products are on the following pages – for accessories, see the Price List

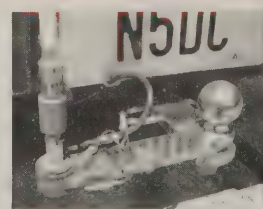


## Radio Amateur Callbook CD-ROM-1998

Access Callsigns, Names and Addresses of more than 1.5 million listings world-wide covering more than 250 countries, islands and dependencies. Includes both North American and International listings.

### FEATURES

- For 1998 – Brand New Amateur Radio Prefix Maps
- Includes country names, date of birth • QSL Manager listings
- Print program with multiple entries to customize a mailing label or logging format; contesters can record callsigns and automatically print custom fields for labels or QSL addressing.
- Windows/DOS platform for US & International data retrieval
- Windows icon driven by mouse & DOS via menu
- Data display by callsign, last name, city, license class issue & expiration date • Morse code sound output to PC speaker
- Search U.S. stations by callsign, last name, county, city & zip
- Search International data by callsign • Text search by name, street, city, province or region
- Text search of clubs, then and nows, military & silent keys
- US data includes time zones, latitude/longitude & area codes



## DC SALES "Tenna Hitch"

A heat treated, high strength aluminum bracket with an insulated 3/8" x 24 antenna mounting stud. Just install under the ball of any Class-1 or

Class-2 trailer hitch and attach the coaxial cable. Handles the largest mobile antennas, and does not interfere with trailer towing capability. No holes to drill, all hardware is supplied ..... **\$35<sup>95</sup>**

Toll Free:

**1-800-558-0411**

e-mail: [help@aesham.com](mailto:help@aesham.com)

Internet: [www.aesham.com](http://www.aesham.com)



## BUCKMASTER

HamCall CD-ROM for MAC and IBM PC Compatibles

Look up over a million listings by Call, Name, Address, City, Zip, Call sign suffix and country. Plus, license issue date, expiration, birth date, previous call, area code, hours past GMT, previous class, and new high-precision latitude, longitude, and grid square. Retrieve by Callsign, Name & zipcode on Macintosh ..... **\$50<sup>00</sup>**

### Other features:

- Windows 95 Compatible • Extensive international listings • Print standard 1-up labels • Hundreds of programs & data files of ham related subjects • Over 40 MB of MAC software. Over 1000 text files
- Interfaces with many popular logging programs • Photos now added to license information



## WALNUTCREEK

QRZ! Ham Radio CD ROM • Vol. 8

Brings 985,985 callsigns from stations around the world to your fingertips. Full database listings are included for Austria, Brazil,

Canada, Cuba, Israel, Italy, Mexico, Monaco, Portugal, Turkey, and the U.K.

- Includes the latest FCC Listings • 985,985 callsigns
- Internet E-mail addresses of over 51,000 hams
- Over 3,000 PC Ham Radio Programs • TARRI info files and bulletins
- Morse Code Training Software, Radio & scanner MODS
- TCP/IP packet radio BBSs, satellite tracking
- On-line FCC exam training • Computer radio control programs
- Contest logging software • Digital QSL cards with built-in image viewer
- RTTY, WEFAX, Rose, TheNET, DSP files • WAV files for TNC testing
- Sample callbook source in C and .DLL API library
- Support for RBBS, Opus, PC Board, Spitfire, Maximus, and Wildcat BBS

Designed for Windows 95 with compatibility with Windows 3.1, NT, MSDOS, Macintosh, OS/2, SunOS, Linux, NeXT, AIX, HP/UX, SCO and IRIX



# HF-VHF SMARTUNER™

1.0-60 MHz • 100 WATTS

## SG-231 HF-VHF SMARTUNER™

*A smart, slim version of our intelligent Smartuner antenna coupler*

- ◆ Complete frequency agility with no operator intervention
- ◆ Continuous coverage of 1-60 MHz with almost any antenna
- ◆ Compact design, fits the most restrictive installations
- ◆ Weatherproof case allows mounting at antenna feed point for highest efficiency



The SG-231 uses a microprocessor controlled pi of L network to match virtually any load to your transceiver; with the SWR always 1:1.5 or better. Tuning solutions are stored in a non-volatile memory for fast (10ms) automatic recall! Operates with any HF or VHF transceiver, 3 to 100 watts, and requires only 12VDC and RF connections.

The SG-231—*designed for any radio application*—a smart addition to SGC's Smartuner series, and a smart choice for your next antenna coupler.

**For Prices & Accessories – See SGC in the Price List**



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P.O.Box 3526, 98009 Fax: 425-746-6384 or 746-7173 Tel: 425-746-6310 or 1-800-259 7331  
E-mail: SGCMKTG@aol.com World Wide Web: sgcworld.com

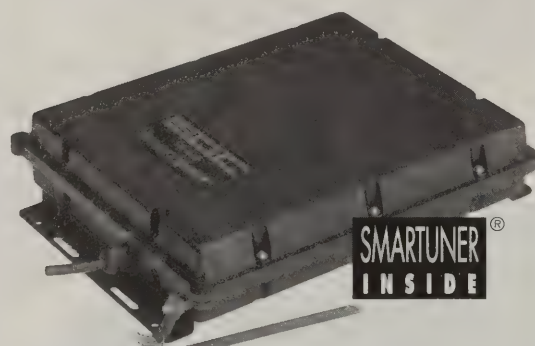


# BUY SMART

## SG-230 Smartuner®

Antenna Coupler

SSB, AM, CW & DATA



You can't buy a smarter tuner than this. An automatic antenna coupler so intelligent it precisely tunes any length antenna -8 to 80 ft-in the HF band.

The Smartuner® automatically evaluates and switches 64 input and 32 output capacitance combinations, plus 256 inductance combinations in a "pi" network. The amazing result is over a half-million different ways to ensure a perfect match for your transceiver. And the most intelligent feature of all is that the Smartuner remembers the chosen frequency and tuning values, and will automatically reselect those values -in less than 10 ms, each time you transmit on that frequency.

The SG-230 Smartuner®. Buy smart.

MICROPROCESSOR CONTROLLED • NON-VOLATILE MEMORY

- WATERPROOF B.I.T.E. INDICATOR • 1.8 TO 30 MHZ RANGE
- 10 TO 200 WATTS INPUT POWER 10ms RETUNING TIME
- 8 to 80 ft. ANTENNA (all types)

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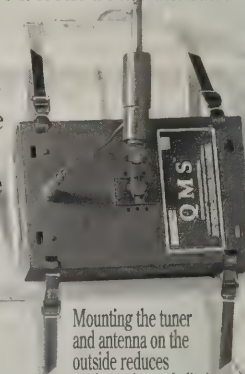
## OWN THE WORLD'S BEST FOUR-WHEEL-DRIVE BASE STATION

Add a QMS Antenna Tuner System to your SSB.

The QMS is an SGC Smartuner® automatic antenna coupler, an SG-303 extended full-range antenna, and the special exterior-waterproof-mounting package, all in one.

The QMS is that large box strapped to the side. We admit, at first glance it looks a little unusual.

But once you use it, you'll find an almost unbelievable jump in reception and transmitting range (3-20 db). The QMS makes a typical HF-SSB perform like it's never performed before. Match it with a cutting edge SGC HF-SSB and it will blast holes through major mountain ranges and probably some laws of physics. Power and focus are everything in HF-SSB ham rigs. Buy this and own the best base station on-or off-the road.



Mounting the tuner and antenna on the outside reduces engine noise and eliminates power-draining antenna wire runs between the antenna and tuner.

QMS. It's the look of focused power.

**LEARN TO LOVE THE LOOK**

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# Couple to 500 Watts

**SGC  
SG-235  
SMARTUNER**



**S**martTuning—Now at 500 watts. Now you can achieve perfect coupling of your 500-watt HF-SSB to your antenna. Go **mobile** at **500 watts!**

The SG-235 Smartuner “intelligently” tunes any length antenna from 23 feet! No preliminary tuning or adjustment is required and the SG-235 will operate with any HF transceiver in the 1.8 to 30 MHz range and with output power from 3 to 500 watts.

**A**utomatically, the SG-235 Smartuner evaluates and switches 64 input & 32 output capacitance combinations plus 256 inductance combinations in a “pi” network—over a half-million matches. The SG-235 Smartuner then remembers the chosen frequency and tuning values and automatically reselects those values—in less than 10 ms, each time you select that frequency. Flexibility is a key feature with its attractive options, including 24 VDC.

- Microprocessor Controlled
- Non-Volatile Memory
- Waterproof for All Weather
- Built-in Test Equipment Indicator
- 1.8 to 30 MHz Range
- 3 to 500 watts Input Power
- 10-mS Retuning Time



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# BRAIN POWER

**SGC  
SG-500  
SMART  
Power  
Cube**



Microprocessor Controlled Linear Amplifier: for 1.8 to 24 MHz

**T**he SG-500 SmartPowerCube produces tremendous power—nearly as much as a 1000W amplifier. Yet it requires less than one cubic foot of space. Electronic brain power makes this possible. The SG-500 is an intelligent—microprocessor-controlled—high power linear amplifier, designed with high efficiency transistors. Its electronic brain constantly monitors your HF-SSB’s activities, power needs, and antenna condition, and automatically—in less than 15 milliseconds—selects the right broadband filter.

**I**t’s designed to perform reliably and essentially unattended, in the most demanding conditions. For maximum power—intelligent power—at low cost, the SG-500 Smart Power Cube is just the amplifier that you need.

Power Output:  
SSB: 500 watts PEP  
CW: 500 watts 10 min. (no fan)  
500 watts unlimited with fan  
AM: 250 watts carrier max.  
Band Switching: fully automatic  
Protection: Input overdrive, over current, over temperature  
Domestic: 1.8–24 MHz



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# HEAR in the CLEAR



## SGC PowerClear™ "Add-on DSP"

SGC's new PowerClear™ uses the power of advanced **Digital Signal Processing** to clear noisy, interference-plagued audio.

Mates with any HF SSB unit. Reduces noise and interference from virtually any audio source—HF, VHF/UHF transceivers, scanners, shortwave receivers, micro-wave, and telephone lines.

PowerClear attacks noise and heterodynes with advanced DSP algorithms and lets you tailor bandpass response to your individual need—separate adjustments for low and high cutoff as well as audio bandpass shift.

Cut through the noise with factory preset filters and with up to seven combinations of your choice. The bright red and green LEDs quickly show your selected filter adjustments. Only 3.65" high!

Hear more with SGC's PowerClear.

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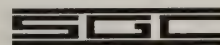


# POWERTALK™

Stunning HF-SSB Receive  
Clarity With SGC DSP.



**W**ith SGC's new PowerTalk™, you'll intercept weak HF signals, increase signal clarity and eliminate unwanted noise. You'll hear SSB signals clearer and easier than ever before. PowerTalk™ combines the advanced receiver technology of SGC's exclusive ADSP™ (Automatic Digital Signal Processing) and SNS™ (Signal Noise Subtraction). Fast audio *and* visual tuning—a DSP command center with a high performance spinner knob and bright LED indicators. Plus all the outstanding features of the popular SG-2000: 644 ITU and ham frequencies, programmable memory, large LCD display and 150 watts of power out. PowerTalk™ is a true HF-SSB Power Tool. We have all the details. Call us *and hear more*.



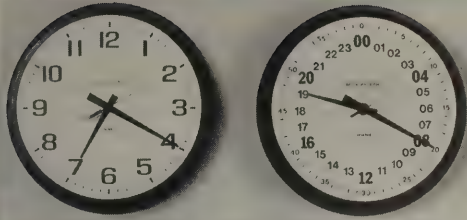
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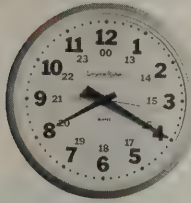




# CLOCKS • POWER SUPPLIES



**BMI 972A** (left) Battery operated 12-hour time quartz controlled clock with sweep second hand. Huge 12" dial allows excellent visibility in large rooms. Accurate! Black textured case and clear glass crystal. Uses one (size AA) battery. 14" diam. x 1 1/2" deep. Looks good in the Shack!.....\$28<sup>95</sup>  
**BMI 973A** (right) 24-hour version.....\$49<sup>95</sup>



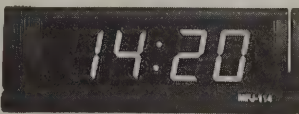
**BMI 972AD**  
 14" diameter,  
 12/24 hour format  
 wall clock ....\$32<sup>95</sup>

**MFJ 105C**  
 24 Hour Quartz Wall Clock  
 Handsome black, 10" diameter face, sweep second hand. Uses single "A" battery, not included.....\$19<sup>95</sup>



**MFJ 112**  
**Dx'er's World Map Clock and Calendar**  
 Adds a touch of class to your ham shack! Features pushbutton selection to highlight and show the month, day and 12 or 24 hour local time in 25 key cities around the world. Large 1 1/2" LCD readout, alarm function. One-second/day accuracy. Includes handy tilt bracket and lithium battery. 5 1/2" w x 3 3/4" h x 5/8" d ..... \$24<sup>95</sup>

**HUGE!**  
 6.5" high x 13" wide  
 2.3" high Digits



**MFJ 114** Giant LED 24/12-hour clock. Has four Gigantic 2.3" high digits; the 12 or 24-hour display format is visible 50 away or more! 110VAC with battery back-up. 6 1/2" h x 13" w x 1" d ..\$39<sup>95</sup>



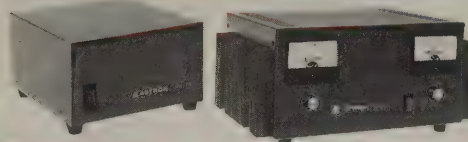
**MFJ Small 24-hour Clocks** • A Dual Clock with separate UTC & local time displays, and a Single Clock with 24 hour time only. Heavy brushed aluminum frame, 5/8" high LCD numerals, sloped face. Flashing seconds colon, battery included.

**107B** Single Clock, 2 1/4" w x 1" h x 2" d ..... \$9<sup>95</sup>  
**108B** Dual Clock, 4 1/4" w x 1" h x 2" d ..... \$19<sup>95</sup>



**MFJ 116**  
 24/12 Hour LED Clock with a switchable 24 or 12 hour display. Large, Red 5/8" LED digits. ID timer keeps you legal by alerting you to state your call every ten minutes. 110VAC operation with battery back-up. Compact, 4 1/2" w x 2" h x 4" d ..... \$14<sup>95</sup>

## ASTRON Power Supplies



### The alternative to costly "matching" Supplies!

105-125V AC input, 13.8V DC output; internally adjustable from 11-15V • Electronic regulation with fold-back current limiting and crowbar overvoltage protection • Heavy-duty heat sink • 3-wire cord • 1-year Warranty • Made in U.S.A. Separate voltage & ampere meters on RS-20M, 35M, 50M and 70M. Separate voltage & ampere meters, plus voltage adjustment (2-15V DC) on VS-20M, VS-35M & VS-50M. RM-35M, RM-50M & RM-60M are Rack Mount models.

Astron Model	Cont. Amps	ICS Amps	Size (in.) H W D	Shipping weight
RS-7A	5	7	3 1/4 x 6 1/2 x 9	9
RS-10A	7 1/2	10	4 x 7 1/2 x 10 1/2	11
RS-12A	9	12	4 1/2 x 8 x 10 1/2	13
RS-20A	16	20	5 x 9 x 10 1/2	18
RS-35A	25	35	5 x 11 x 11	27
RS-35A/220V	Same as RS-35A	but 220V input		
RS-50A	37	50	6 x 13 3/4 x 12	46
RS-70A	57	70	6 x 13 3/4 x 12	48

With separate Volt & Amp meters				
RS-20M	16	20	5 x 9 x 10 1/2	18
RS-35M	25	35	5 x 11 x 11	27
RS-50M	37	50	6 x 13 3/4 x 11	46
RS-70M	57	70	6 x 13 3/4 x 12	48

Adjustable output; separate Volt & Amp meters				
VS-20ML	16	20	5 x 9 x 10 1/2	20
VS-35M	25	35	5 x 11 x 11	29
VS-50M	37	50	6 x 13 3/4 x 11	46
Rack mount models; separate Volt & Amp meters				
RM-35M	25	35	5 1/2 x 19 x 12	38
RM-50M	37	50	5 1/2 x 19 x 12	50
RM-60M	50	55	7 x 19 x 12	60

### Other ASTRON models...

**RS-4L** Power supply with built-in cigarette lighter receptacle in the front panel. 13VDC @ 4A peak, 3 Amps continuous. 3 1/2" h x 6 1/2" w x 4 1/4" d, 6 lbs \$49<sup>95</sup>

**RS-12S** Power supply with built-in speaker. Rated 13VDC @ 12 Amps peak & 9 Amps continuous. 4 1/2" h x 8" w x 9" d, 13 lbs ..... \$89<sup>95</sup>

### Switching Power Supplies

**SS-25** 12V DC, rated 20 Amps continuous, 25 Amps ICS. 3" h x 7" w x 9" d, 4.2 lbs .....\$129<sup>95</sup>  
**SS-25M** As above, with volt/amp meters .\$149<sup>95</sup>

**SS-30** 12V DC, rated 25 Amps continuous, 30 Amps ICS, 3 3/4" h x 7" w x 9" d, 4 lbs, 8 oz. \$149<sup>95</sup>  
**SS-30M** As above, with volt/amp meters .\$169<sup>95</sup>

### Power Inverters

#### General Purpose

**12/115** Converts 12V DC to 115VAC @ 60 Hz. Provides convenient AC house current in your Boat, Car, Truck, Camper, etc. Powers your ham rig, small household appliances, TV, tools, radios and lights up to 200W continuous, with peaks up to 240W and overload protected. Note: This unit produces a square wave output which is not recommended for devices where high transients are not tolerable. 4 1/2" h x 8" w x 9" d, 9 lbs. .... \$69<sup>95</sup>

#### 28V Aircraft

**2412** Converts 22 to 32V DC input to 13.8V DC output @ 9 amps. Eliminates tapping into a 28V battery for 12V power ..... \$64<sup>95</sup>  
**2412-20** As above, but rated at 16 Amps.. \$89<sup>95</sup>



### Variable Power Supplies

**RP-150** 20 Amp Power Supply with the following features:

- 13.8V DC @ 20 Amps continuous
- Adjustable voltage 2V to 15V DC
- Internal Cooling Fan
- Large, Lighted Volt & Amp Meters
- Cigarette Lighter Socket with Cap
- Binding Posts on Front & Rear
- Ripple less than 3.1mV Peak to Peak
- 8 3/4" w x 4 1/4" h x 7 1/2" d, 14 lbs.

**\$179<sup>95</sup>**

**RP-300** 30 Amp Power Supply, same as RP-150 but:

- 30 Amps continuous
- Binding Posts & spring-loaded Dual Terminals on front
- Detachable power cord
- 10 1/2" w x 5" h x 11" d, 24 lbs.

**\$259<sup>95</sup>**



## POWER SUPPLIES

Powerful Values  
 For Ham Operators



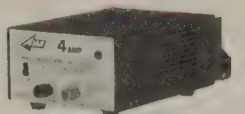
105-125V AC INPUT, 13.8 VDC output; perfect for all your Ham radio equipment. A wide selection, including most popular sizes, rugged construction and low prices. 1 year warranty.

- Solid state, integrated circuitry
- Current-limiting foldback for complete over current protection
- Crowbar Overvoltage protection on 15 amp and larger models
- High quality filtering for very low ripple and low noise, metal cases on all models
- Regulated, output 95% of no-load value

Model#	Cont. amps	ICS	Size	Wt.	Price
PR-7	5	7	3 1/4 x 6 1/2 x 7 1/2	7	\$49 <sup>95</sup>
PR-10	7.5	10	4 1/2 x 6 1/2 x 7 1/2	10	69 <sup>95</sup>
PR-12	9	12	4 1/2 x 6 1/2 x 7 1/2	11	74 <sup>95</sup>
PR-20	16	20	4 1/2 x 6 1/2 x 7 1/2	15	99 <sup>95</sup>
PR-30	24	30	6 1/2 x 6 1/2 x 10 1/2	23	129 <sup>95</sup>
PR-40	32	40	6 1/2 x 10 1/2 x 11 1/2	27	169 <sup>95</sup>
PR-50	37	50	6 1/2 x 10 1/2 x 11 1/2	30	199 <sup>95</sup>
PR-60	48	60	6 1/2 x 10 1/2 x 11 1/2	33	239 <sup>95</sup>

### AIM ELECTRONICS

**38-384** Light Duty DC Power Supply Input: 115V AC. Output: 13.8V DC regulated @ 4A Front panel binding posts, LED "ON" indicator, fuse protection. 7 3/4" d x 4 1/4" w x 3" h, 5 1/2 lbs ..... \$39<sup>95</sup>



**38-305** AC Adapter Provides multiple low-voltage DC to operate various battery powered equipment requiring 3, 4.5, 6, 7.5, 9 or 12V DC @ 500ma. Multiple application plugs and 9V snaps fit most devices ..... \$9<sup>95</sup>

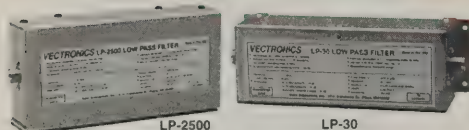


**38-312** Regulated AC Adapter Multi-voltage with multiple plugs and 9V snaps. Provides 1.5, 3, 4.5, 6, 7.5, 9 or 12V DC regulated @ 1200ma. to operate a wide range of battery operated devices..... \$29<sup>95</sup>





## VECTRONICS Amateur Radio Products



### TVI FILTERS

**LP-30 Low Pass Filter** Suppresses TV interference from HF transmitters operating below 30MHz. Use between transmitter and the antenna or tuner to provide up to -70dB attenuation of harmonics that fall within the TV bands. For 52Ω coaxial systems, up to 30MHz & 1500W continuous... **\$49<sup>95</sup>**

**LP-2500** Rated for 2500W continuous RF... **\$79<sup>95</sup>**

### HPF-1 High Pass

**Filter** Installs at the TV set antenna terminals to reduce television interference caused by over load and harmonics from HF transmitters operating below 30MHz. High harmonic attenuation with low loss in the 52-550MHz TV passband. Unique shield-breaking circuit prevents antenna cable from acting like an HF antenna. For 300Ω balanced system but also comes supplied with baluns with Type F connectors for 75Ω coax... **\$19<sup>95</sup>**



### DUMMY LOAD

**DL-300M Dry load** Simulates an accurate 50Ω antenna up to 150MHz. Test your transmitter without radiating a signal on the air. Power handling curve is rated at 300 watts for 15-seconds, down to 100 watts for 40-seconds. VSWR <1.3:1 at 500MHz 5" w x 2 1/4" h x 2" d... **\$34<sup>95</sup>**



## Forbes Group Ventenna™

Get around those antenna restrictions and finicky neighbors. The **Ventenna** is virtually unnoticeable because it looks like part of the normal structure. To install, just slip it over an existing 1" to 2 1/2" plumbing vent pipe, connect up your coax and you're on the air.

**Ready to go! - No Tuning or Measuring required.**

Single band models for 2 meters, 220MHz or 440MHz & a 2M/440MHz Dual Bander.



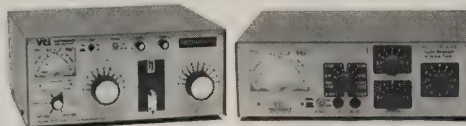
- VT-14** 2 meters, 3 ft. tall, 2.6dB gain ..... **\$49<sup>95</sup>**
- VT-22** 220MHz, 25" tall, 2.6dB gain ..... **\$49<sup>95</sup>**
- VT-27** 2m/440MHz Dual bander..... **\$74<sup>95</sup>**
- VT-44** 440MHz, 14" tall, 2.6dB gain ..... **\$49<sup>95</sup>**
- VT-15S** Scanner model 3 ft. tall, 2.6dB..... **\$49<sup>95</sup>**



### ANTENNA TUNERS

**VC-300M Mobile Tuner (left)** Compact, lightweight and economical for base or mobile. use. Tunes verticals, dipoles, inverted Vs, beams and mobile whips that are fed by coaxial cable. Also tunes open wire feeders, balanced lines, or single wires. Covers 1.8 to 30 MHz with a 300W continuous power rating. The dual-movement cross-needle meter simultaneously monitors RF power output & SWR. 7 1/4" w x 3 1/2" h x 8 3/4" d, 2 1/2 lbs..... **\$99<sup>95</sup>**

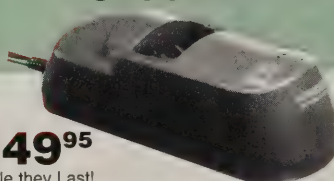
**VC-300DLP Antenna Tuner (right)** A quality, economical tuner. Covers 1.8-30 MHz with a 300W continuous RF power capability from 3.5-30MHz & 150W on 1.8MHz. Built-in dummy load, dual-movement cross-needle peak or average reading meter. Compatible with almost any antenna - coax fed, balanced or single wire. Built-in 4:1 balun and six-position antenna selector switch 10 1/4" w x 9 1/2" d x 3 1/2" h, 3 1/2 lbs..... **\$149<sup>95</sup>**



**VC-300D** Antenna Tuner (right) Offers the same functions and specifications as the VC-300-DLP shown above, but has the additional capability to show a peak power indication by using an instantaneous responding digital bargraph meter display. A LEVEL and DELAY control has been added to calibrate the display to the meter, and to vary the delay response... **\$179<sup>95</sup>**

**HFT-1500** Antenna Tuner (left) Rated for 1500W from 1.8 to 30MHz; 1000W (2KW PEP) on 160 and 10 meters Features a cranked continuous roller inductor with a turns counter and vernier tuning on the antenna and Input capacitors. The dual-movement cross-needle meter shows average forward and reverse power and SWR; a 21-segment bargraph indicates peak power. A true RF directional coupler sensor is used for the wattmeter circuitry. Includes a built-in 4:1 balun for balanced antenna systems and 6 position antenna selector switch. 5 1/2" h x 12 1/2" w x 12" d, 10 lbs .... **\$399<sup>95</sup>**

## KENWOOD BC-15A Desk Charger CLOSEOUT



**\$49<sup>95</sup>**

While they Last!

Charges Kenwood PB-13, PB-14, PB-17 & PB-18 HT batteries in 60 to 100 minutes.

BC-15A looks similar to model pictured.

## BIDS & PURCHASE ORDERS

**AES®** accepts written and signed Purchase Orders from Companies, Federal, State, County & City Government agencies, as well as the Military, Schools, Colleges and Universities.

We welcome the chance to bid on your requirements and we search the Internet daily for requests from all Government agencies. We are registered with FACNET and accept Government I.M.P.A.C.® Charge Cards on all Purchase Orders without a Surcharge. Net 30 Day terms are available to Government agencies, Schools, and Companies highly rated in Dunn & Bradstreet (D&B).

For more information, contact Paul Szczerbinski, W9KHO (pauls@aesham.com) at AES Milwaukee. Toll Free 1-800-558-0411 • fax 414-358-3337

## COMET 40 to 2M Mobile Antenna

**CA-HV** Mobile Antenna (left) Designed specifically for use with the new radios that cover HF thru 2M. Choose either 1 or 2 of the following HF coils: 40/(\*20)/15/10 meters along with constant operation on 6 & 2M. Unique fold-over hinge brings the antenna down to about 6" in height for entering garages. Mounts to most SO-239 type trunk mounts, and is about 6 ft. tall with the 40M resonator on the top.

COMET makes several duplexer combinations. The CF-530 to combines both the HF/6 meter and 2 meter radio connectors into a single connector going to the CA-HV. Should you want to use separate HF, 6 Meter and 2 Meter antennas, the COMET CF-360B duplexer will separate the HF/6 meter radio connector back into an SO-239 for HF and SO-239 for 6 meters

**CA-HV** Antenna... **\$129<sup>95</sup>** \*20M coil opt.

**L-14** 14MHz coil... **\$36<sup>95</sup>**

**CF-530** HF/2M-440MHz Duplexer... **\$74<sup>95</sup>**

**CF-360B** HF/6M-440Mhz Duplexer... **\$69<sup>95</sup>**

### HA-4S HF Mobile Antenna (right)

Features switching between 4 HF bands without changing coils or plugs. Standard coils include 40, 15, 12, 10M (20M optional). Compact and lightweight, only 1 lb, 14 oz, and just 4 ft. 10 in. tall which allows for more convenient HF mounting options than conventional HF mobile antennas. Mounts on a trunk-lip style bracket such as the Comet RS-820 (shown), or a rain gutter mount such as the RS-80. High quality construction includes a gold-plated PL-259 at the base, and a threaded collar that unscrews to expose a hinged base, allowing a 90 degree fold-over for garaging... **\$179<sup>95</sup>**



**WS-1M** Window Mounting Bracket Perfect for vehicles with pop-out windows, rental cars, etc. Adjustable, with suction cups on the inside and outside. Includes 11 ft. of coaxial cable with connectors. Heavy-duty, allows for mounting gain-type antennas such as the Comet B-20 or Comet SB-5 dualbander models, etc..... **\$64<sup>95</sup>**



### NCG Power Pocket

Handy portable power for Emergencies, Hamfests, Hiking, etc. A 12 Volt-2 ampere/hour sealed lead-acid rechargeable battery provides extended talk time, up to 6 times longer than standard battery packs, and can be recharged to 100% anytime without the usual memory effect.

Your radio conveniently plugs into the included female adapter socket. Contained in a compact carrying case with belt loop and shoulder strap, and the entire pack weighs only 30 oz. Complete recharge in 6 to 8 hours, with the supplied charger. 3 1/2" w x 1 1/2" d x 6 1/2" h, 30 oz..... **\$66<sup>95</sup>**

NCG Light-weight boom microphone & headset combination for popular hand-held radios. Conveniently folds-up for easy storage. Boom microphone pivots to allow left or right ear speaker position. Includes push-to-talk switch and 36" cord.

**MP-28** Icom, Standard Yaesu, Alinco version... **\$39<sup>95</sup>**

**MP-28K** Kenwood .... **\$39<sup>95</sup>**





# Keep On Movin' with STANDARD's Mobiles

**3 Bands...2, 70 cm, & 6 Meters!  
C5900DA! One compact package!**



## C5900DA FEATURES...

Tested tough against intermod with Double Balanced Mixer (DBM) and Tracking Front-End DTMF remote control with HT Cross-band repeat, 6M, 2M and 70cm with CTCSS encode/decode Full Duplex cross-band operation with CTCSS encode/decode 7 priority hyper frequencies 1200-9600 packet interface Antenna Triplexer Built-in one antenna for all bands Dual-frequency display; left side 6m, 2m and 70cm, right side 2m and 70cm

### Frequency Receive Range:

Left band 44.000 - 99.995 MHz  
100.000 - 199.000 MHz  
240.000 - 530.000 MHz  
Right band 100.000 - 200.000 MHz  
260.000 - 510.000 MHz  
550.000 - 1020.000 MHz\*

(both including AM aircraft)  
45 Watts 6M, 50 Watts 2M and  
35 Watts 70cm (3W Low, 10W  
Medium selectable) transmit  
ham-bands

\*cellular blocked on 800 MHz band  
Size: 5.51"W 1.57"H 6.81"D

Weight=2.65 lbs.

## MEMORIES...

- 80 memories (each side); stores frequency, offsets, CTCSS tones and much more
- Expandable 200 memories each side with optional, CMU161
- Frequency steps, 5, 6.25, 10, 12.5, 15, 20, 25, 30, 50 and 100 kHz.
- Paging/Coded squelch
- DTMF autopatch dialing, 12 memories, 6 per side, 15 digits
- Eight kinds of scan: 1 MHz, entire band, program, memory, block memory, program memory, memory scan memory and tone

## DISPLAY...

- Snap-on front display or remote the radio in the trunk or under the front seat
- Back-lit Keypad and Display
- MY key, store favorite function
- TX Time-Out-Timer 3, 5, 15 mins
- Auto power-off 3, 6, 9 hrs
- Auto mute opposite band -20dB
- Beep-tone off, low or high
- Cooling fan built-in.

Mobile bracket and power cord (2M) included

MARS and CAP modification available; permit required

**C1208DA Twin-Band has everything in the Speaker/Mic... and delivers 50 watts, too!**



## C1208DA TWIN-BAND MOBILE FEATURES...

A full featured 2-meter rig that fits anywhere, yet puts out a full 50 watts as well - that's Standards C1208DA!

With all controls and the large liquid crystal display in the speaker/mic, this rig can mount anywhere - no more compact car woes! The rig's under the seat, behind the dash, or in the trunk (with optional extension cable) - all you need is in your hand. All this, plus it's packet ready (up to 9600 baud!)

### Frequency range:

Receives 110-199.995 MHz and 250-519.995 MHz plus 800\* MHz (including AM aircraft) .  
50 Watts, 10W and 3W selectable  
Built in Antenna Duplexer for 450 MHz receive

\*Cellular blocked on 800 MHz band

## MEMORIES...

- 100; stores frequency, offsets and CTCSS tones.
- CTCSS Encode/Decode standard.
- Frequency steps, 5, 10, 12.5, 15, 20, 25, 50 and 100 KHz.
- Paging/Coded squelch.
- DTMF autopatch dialing, 10 memories, 15 digits.
- Six kinds of scan, including priority and CTCSS.

## DISPLAY...

- Back-lit Keypad and Display
- Auto mute: four settings (-10, -20, -30 and off)
- Semi Duplex cross-band operation with CTCSS tones
- Cooling fan built-in

Size: 5.51"W 1.18"H 5.79"D  
Weight 1.65 lbs..

Mobile bracket and power cord (3m) included.

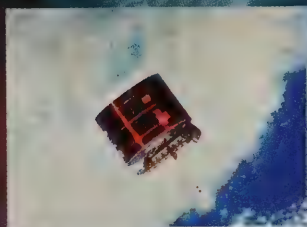
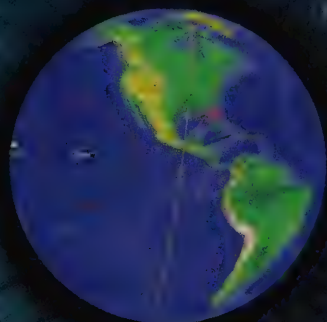
For more information on this and other STANDARD products, please contact your nearest STANDARD dealer. Specifications, price and features are subject to change without obligation or notice. Standard Amateur Radio Products, Inc. P.O. Box 48480, Niles, Illinois 60714. Tel (773) 763-0081 Fax (773) 763-3377



**STANDARD®**



# If It Orbits The Globe



**\$69.95**  
Plus Shipping & Handling

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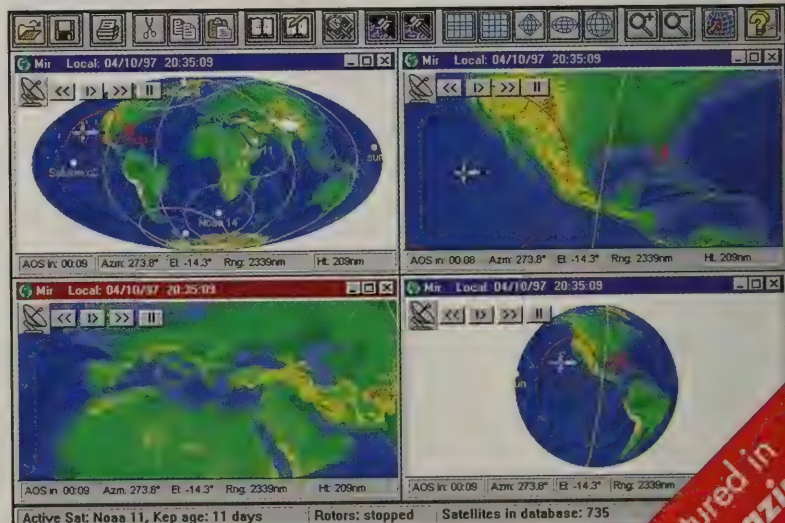


**LogSat Professional** - The most popular satellite tracking program in the world!

### Some of LogSat Professional's features:

- Windows based graphical satellite tracking
- Supports 5 different map sets and text tracking
- Unlimited database capacity for satellite elements
- Supports the Kansas City Tracker rotor interface
- Supports The Satellite Encyclopedia (TSE)
- Includes a logbook manager for Ham radio operators
- Interactive sound tracking and response
- Independent time & date tracking

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Download a **FREE** demo version of  
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<http://www.logsat.com>



Tracking Hundreds of Satellites in dozens of Windows

As featured in  
**CQ Magazine**



# Leading the way in HF technology.

## FT-1000MP

### Revolutionary All-Mode HF Transceiver with EDSP™

- Enhanced Digital Signal Processing (EDSP™) Noise Reducer, RX/TX waveform Contour shaping control, Digital Notch plus IF Notch, Digital CW Narrow Filters, Microphone Equalization • Shuttle Jog™ Tuning Enhancement • Directional Tuning Scale for CW/Digital Modes and Clarifier Offset Display • Selectable Antenna Jacks • Programmable Tuning Steps • 100W PO • Dual In-band Receive with Separate S-meters • Built-in Collins® SSB Mechanical Filter • CW Electronic Keyer with two Key jacks • CW Spot • Automatic Antenna Tuner • 100-117, 200-234V AC and 13.5V DC power inputs • DC version available • 99 Memories.

## FT-1000/D

### Elite-Class All-Mode HF Transceiver

- 200W PO • Dual Receive • 108 dB dynamic range • Cascaded IF Filters • Direct Digital Synthesis (DDS) • IF Width/Shift/Notch • CW Spot • CW Audio Peaking Filter • CW Electronic Keyer with two Key jacks • IF Noise Blanker • Automatic Antenna Tuner • RF Speech Processor • Front panel RX Antenna selector switch • Two large fly-wheel-weighted tuning knobs • 99 Memories.

## FT-920

### All-Mode HF/6m Transceiver

- High-Performance 33MIPS\* DSP • HF + 50 MHz w/100 Watts-all Bands • MOSFET PA Finals • High Speed Auto Antenna Tuner (works on RX & TX) • Omni-Glow™ Dual Display • Twin VFO Knobs • FET RF Amplifier for High & Low Bands • Digital Voice Memory System • Quick Memory Bank (QMB)/Frequency System • 127 Memories. \*Million Instructions Per Second

## FT-900C/AT

### Deluxe Compact HF Transceiver

- Detachable Front Panel Design • 100W PO • Built-in Collins® SSB Mechanical Filter • Automatic Antenna Tuner • IF Shift/Notch • Keypad Frequency Entry • Duct Flow Cooling System • Digital Metering • Adjustable CTCSS Tones • 100 Memories.

## FT-840

### High Performance Compact HF Transceiver

- High Receiver Dynamic Range • Dual Band Stacking VFOs with Direct Digital Synthesis (DDS) • 100W PO • IF Shift • IF Noise Blanker • Digital Mode Interface • CW-Reverse feature • Adjustable Repeater CTCSS Tones • Optional (External) Automatic Antenna Tuner • 100 Memories.

## FT-600

### Multi-Purpose HF SSB Transceiver

Frequency Range: RX: 50 kHz - 30 MHz; TX: 160-10M • 100W PO • MIL-STD 810 Rating • Alphanumeric Omni-Glow™ LCD Display • Keypad Frequency Entry • Optional CW (500 Hz) and AM (6 kHz) filters available • Dual Watch • Front-mounted Speaker with High Audio Output • PC Programmable • 100 Memories (in 4 banks of 25).

# YAESU

Choice of the World's top DX'ers

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Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details. Collins is a Registered trademark of Rockwell International Corporation.



"The FT-920 is packed with really high-tech features!"

"And, it's got 6 meters built in, too!"



"Yeah! Shuttle Jog, DSP--with a 33MIPS\* processor--fastest on the market."

"Looks like Yaesu did it again!"

# FT-920

All-Mode HF/6m Transceiver

You know the difference--and so does Yaesu. Signals buried in noise and interference miraculously appear at your speaker--the surest indicator of HF quality. As always, cutting-edge technology inside separates the world leader in amateur radio from the rest of the pack. No surprise to you.

What makes the difference? High-performance 33MIPS\* Digital Signal Processing (DSP), for razor-sharp selectivity, increased average power output, and voice pattern contour choice; automatic seeking DSP Notch filter and Noise Reduction; built-in high-speed antenna tuner for RX and TX; user-friendly DSP Bandwidth controls for enhanced interference reduction; and exclusive Shuttle Jog tuning controls for fine or rapid frequency excursions. For operating efficiency, the FT-920 also has a Digital Voice Recorder and Electronic Memory Message Memory Keyer. Providing up to

100W of adjustable power output on all amateur bands from 160 through 6 meters, the FT-920 uses rugged, low-distortion MOS FET final amplifier transistors. SSB, CW, AM (25W carrier), AFSK, and FSK are built in, with FM, optional.

All of this, and an ergonomically-designed front panel--including Yaesu's renowned Omni-Glow™ display--give you the highest-performing, HF/6 meter rig in its price class.

For more details on the new and different FT-920, call or write for a free brochure, or better yet: hear the difference at your dealer today!

## YAESU

... Choice of the World's top DX'ers

For the latest Yaesu news, hottest products, visit us on the internet! <http://www.yaesu.com>

### Features

- High Performance 33 MIPS\* Digital Signal Processing (DSP) in all Modes with one touch control
- HF + 50 MHz with 100 Watts Output on all Bands
- New Design MOSFET PA Finals
- Built-in High Speed Auto Antenna Tuner including 50 MHz (Antenna Tuner works on both RX & TX)
- Auto Notch/Noise Reduction Control
- Simplified Tuning with Shuttle Jog Control
- Omni-Glow™ Dual Display with Twin VFO Knobs
- Separate FET RF Amplifier for High & Low Bands
- Digital Voice Memory System
- Quick Memory Bank (QMB) Instant Frequency Memory System

\*Million Instructions Per Second

# The real difference is the signals you hear-- not the ones you see.



State-of-the-Art DSP Bandwidth Controls



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### FT-1000MP

This HF standout features a high-intercept front end design, EDSP, and built-in Collins SSB Mechanical Filter





# VHF/UHF All-Mode Transceiver **FT-736R**

"Why bother with imitation satellite rigs, when the FT-736R has more bands, and AC and DC, too?"



"Right! And Yaesu also makes a choice of two companion rotators!"

"Yaesu did it again!"

## Satellite leader for eight years, far and away.



**D**emanding VHF and UHF amateur operators know their "stuff." That's why the Yaesu FT-736R, and companion G-500A or G-5400B rotator, have been their station of choice for over eight years. To sustain that leadership position, Yaesu engineers specifically designed the FT-736R to meet the mandates of this unique operating interest.

Not only does the FT-736R come with 144 and 430 MHz bands, easy-to-install modules instantly add two more, for a total of four. To customize your transceiver, choose from bands available in 50, 222, or 1240 MHz. Four bands – available on only one radio – the FT-736R.

No tuning problems with the FT-736R, either. Unlike other "me-too" transceivers, Yaesu's pioneering VFO Tracking System (VTS) automatically sets the uplink frequency on inverted or non-inverted transponders, and the built-in Discriminator Center Meter displays the frequency in use and allows precise tuning on LEO satellite FM downlinks. For flexible operating power needs, the FT-736R uses either 13.8 VDC, or its own

built-in AC power supply. To simplify station setup, interface jacks for PTT, external speakers, TNC Connection, and linear amplifier make installation a snap!

Low receiver noise figures, and a built-in IF CW filter make the FT-736R ideal for weak signal work: EME, Meteor Scatter, FAI, Sporadic-E, or Tropo. Add the G-500A or G-5400B Rotator to the FT-736R, and your complete and exclusive Yaesu package for satellite operation is up and running.

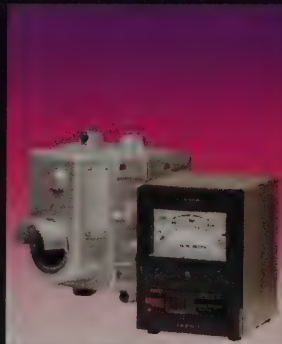
There's no rig quite like the FT-736R. For sheer numbers of specialized features, unquestionable benefits, and satellite rotators made by the only radio manufacturer in the world, let Yaesu take you far and away.

### Specifications

- Frequency Coverage  
2m: 144-148 MHz  
70cm: 430-450 MHz
- 100 Memory Channels
- Full Cross-band Duplex w/Inverted Tracking for AO-13
- Easy Interface to TNC via Data In/Out Jack
- RF Output Power:  
25 W on 144, 222 & 430 MHz  
10 W on 50 & 1240 MHz
- 117/220 VAC, 13.8 VDC
- Emission Types  
LSB/USB (J3E Voice),  
CW (A1A)  
FM (F2D, FSK, F3E Voice)  
TV (A3F optional, for 1.2 GHz\*)  
\*Requires optional Unit

### G-500A

Elevation rotator for space communication antennas.  
Max. Antenna Wind Load:  
12 sq. ft.  
Mast Size: 1 1/2" - 2 1/2"  
Boom Dia.: 1 1/2" - 1 3/4"



### G-5400B

Azimuth-Elevation combination for space communication antennas. DIN connection for computer operation.  
Max. Antenna Wind Load:  
11 sq. ft.  
Mast Size: 1 1/2" - 2 1/2"  
Boom Dia.: 1 1/2" - 1 3/4"  
Rotator Size: 12 1/2" H x 7 1/2" Dia.  
(Mounted together)  
(GS-232 Computer Interface Available)

**YAESU**  
*Choice of the World's top DX'ers*



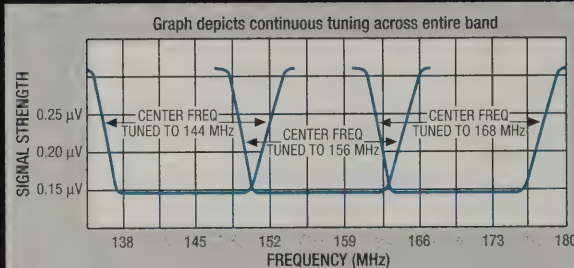
# 2m/70cm Mobiles **FT-2500M/FT-7400H**

## Advanced Track Tuning, Mil Spec, true FM. All in one radio!

Outside, you can easily see why the FT-2500M stands up to the shock and vibration like no other. We engineered the first mobile radio to meet the rigid standards set by the U.S. Military back in the '80s, and that same critical design is in the FT-2500M. From the simplified front panel, rubber coated knobs, durable pebbled finish coating, and huge Omni-Glow™ display to the one-piece die-cast chassis, the FT-2500M can take whatever you throw at it!

Inside, the electrical circuitry meets standards so uncompromising the FT-2500M can respond like no other radio. Built-in 3-Stage Advance Track Tuning (ATT), automatically retunes from 140 to 174 MHz permitting consistent receiver sensitivity across the entire band.

But there's more. Like alpha-numeric display capability! Lets you program a frequency or a 4-character name on any of the 31 memories. With three selectable power output levels and up to 50 watt power output, the FT-2500M extra large heat sink means forced air cooling is not necessary. And, as a bonus, Yaesu's



**3-Stage Advance Track Tuning (ATT)** – The exclusive 3-Stage Advance Track tuning front end automatically adjusts band width sensitivity across the entire receiver range, while maintaining selectivity specifications. ATT significantly reduces interference from inter-modulation and front end overload.

exclusive backlit DTMF mic comes with every FT-2500M.

Experts say the FT-2500M is the only commercial-grade amateur radio available. So, for tough manufacturing standards, inside and out, with true FM clarity, and outstanding performance, the FT-2500M is your mobile.

**YAESU**  
Performance without compromise.™

"Just look inside. Military spec really means something to Yaesu!"

"A QST review says 'the FT-2500M exhibited superior 10 MHz offset IMD dynamic range of 103 db!'"

"This Advanced Track Tuning practically eliminates intermod!"

"Yaesu did it again."

### FT-3000M

High-Powered 2-m FM Transceiver  
Feature-rich, 70 full watts of TX power, and built to the tough performance standards you've come to expect from Yaesu.

**FEATURES** • Frequency Coverage Wide Band Receive-- RX:110-180 MHz, 300-520 MHz, 800-999 MHz\* TX:144-148 MHz • AM Aircraft Receive • MIL-STD 810 Rating • Interactive Programming • High Power Output: 70 Watts, plus 50, 25 and 10 Watts • Quick-Touch™ Dual Concentric Control Knob • Twin Cooling Fans • ADMS-2 Windows™ Programmable • Digital Coded Squelch (DCS) • 81 Memory Channels • Auto Range Transpond System™ (ARTS™) • 1200/9600 Baud Packet Compatible • Smart-Search™ • Alphanumeric Display • Dual Watch • Full line of accessories  
\*800 MHz Cellular blocked



### Specifications

- **Frequency Coverage:**  
FT-2500M  
RX: 140-174 MHz  
TX: 144-148 MHz  
FT-7400H  
RX/TX: 430-450 MHz
- Rugged Military Spec Design
- Advanced Track Tuning (ATT)
- Selectable Alpha-Numeric Display
- Omni-Glow™ Display, largest available
- **Power Output:**  
FT-2500M 50/20/5 Watts  
FT-7400H 35/15/5 Watts
- Flip Up Front Control Panel hides seldom used buttons
- Backlit DTMF Mic
- 31 Memory Channels
- CTCSS Encode Built-in
- Automatic Power Off (APO)\*
- Time-Out Timer (TOT)\*
- Manual\* or Automatic Backlighting Adjustment
- **Accessories:**  
FP-800 20 Amp HD Power Supply w/ Front Mounted Speaker  
FRC-6 DTMF Paging Unit  
FTS-17A CTCSS Decode Unit  
SP-4 External Mobile Speaker w/ Audio Filters

\*FT-2500M





"The quick-release remote front panel gives you so many installation options."

"And with dual receive you can talk on one band, and listen on another!"



"Plus, the high-tech Enhanced Smart Search™ is great for finding repeaters --and you can watch it all on the dual display."

"Looks like Yaesu did it again!"

# FT-8100R

Compact Dual Band Mobile

## Now a dual-bander that remotes and is easy-to-use, without sacrificing the features you want!

With its quick-release, remote front panel system, the FT-8100R combines high-performance dual-band features in a simple-to-operate rugged mobile built to the endurance standards of commercial radios. The result is installation flexibility and industry-first, "must-have" advantages!

Use dual receive (V+V, U+U or V+U), or talk on one band while listening on another. Watch Yaesu's exclusive Enhanced Smart Search™ automatically seek out and load active frequencies--great for finding new repeaters while traveling.

Get wide receive coverage--from 110 to 550 MHz and 750 to 1300 MHz\* for public safety, marine, aircraft, and weather channels. Enjoy up to 50 Watts of VHF power output (35 Watts on UHF) with High/Medium/Low choice on each band, and "plug and play" 1200 or 9600 bps packet. Utilize 208 memory channels--the greatest available on any remote mobile--to store repeater offset, CTCSS tone, packet baud rate, and power level.

Yaesu's popular Omni-Glow™ display provides a wide field of view, and includes a DC voltage meter. Quickly program, or clone frequency memories with optional Windows™ PC programmable ADMS-2D.

"User-friendly" describes the streamlined front panel layout. Eight clearly-marked keys, and separate Volume/Squelch controls for each band, make operation easy. And the backlit DTMF microphone includes 3 user-programmable keys...but no awkward keypad cover!

Don't sacrifice high-performance features in your dual-band mobile installation. Get the easy-to-use FT-8100R at your Yaesu dealer now!

**YAESU**  
...leading the way.™

For the latest Yaesu news, hottest products: visit us on the Internet! <http://www.yaesu.com>

### Features

- Frequency Coverage
  - RX: 110~550 MHz
  - 750~1300 MHz\*
  - TX: 144~148 MHz
  - 430~450 MHz
- Detachable Front Panel (removable w/optional YSK-8100)
- 3 Power Output Levels
  - 2m 50/20/5 Watt
  - 70cm 35/20/5 Watt
- 208 Memory Channels
- Enhanced Smart Search™
- CTCSS Encode
- Built-in Duplexer
- S-Meter Squelch
- Dual Receive (V+V, U+U, V+U)
- Crossband Repeat (bidirectional or one-way)
- PC Programmable w/optional ADMS-2D
- Digital Battery Voltage Display
- Auto Power Off (APO)
- Omni-Glow™ Display
- 1200/9600 bps Packet Compatible
- Alternating-Band Memory Selection (ABMS)
- DTMF Autodialer (6 Memories)
- Time Out Timer (TOT)
- Accessories: Consult your local Yaesu dealer.

\*Cellular & 900 MHz Cordless Phone frequencies blocked.





# One tough little dual bander!

## Features

- Frequency Coverage  
Wide Band Receive  
RX: 76-200 MHz, 300-540 MHz, 590-999 MHz\*  
TX: 144-148 MHz, 430-450 MHz
- AM Aircraft Receive
- MIL-STD 810 Rating
- Digital Coded Squelch (DCS)
- 112 Memory Channels
- 12V DC Direct Input
- High Speed Scanning
- Alphanumeric Display
- CTCSS Encode/Decode
- Auto Range Transpond System™ (ARTS™)
- Dual Watch
- Direct FM
- High Audio Output
- ADMS-1C Windows™ PC Programmable
- Four Battery Savers:  
Automatic Power-Off (APO)  
Receive Battery Saver (RBS)  
Selectable Power Output (SPO)  
Transmit Battery Saver (TBS)
- Time Out Timer (TOT)
- 2.5 and 5 Watt Versions Available
- Built-in Digital Voice Recording System (DVRS)
- Full line of accessories

**NOW  
WITH BUILT-IN  
DELUXE  
KEYPAD**

"You notice how loud this HT's audio is?"

"Yeah, it's Mil Spec tough like a commercial HT."

"Easy to operate, small, great price!"

"Yaesu did it again!"

The foremost in top-performing, durable, dual band handhelds now includes the FT-50RD DTMF keypad with CTCSS enc/dec, DCS enc/dec, DVRS and paging/coded squelch. Manufactured to rigid commercial grade standards, the FT-50RD is the only amateur dual band HT to achieve a MIL-STD 810 rating. Already a winner, the deluxe keypad makes this stand-out HT even better! Water-resistant construction uses weather-proof gaskets to seal major internal components against the corrosive action of dust and moisture. And, the rugged FT-50RD withstands shock and vibration, so throw it in with your gear!

Exclusive features set the FT-50RD apart, too. Wide Band Receive includes 76-200 MHz (VHF), 300-540 (UHF), and 590-999 MHz\*. Dual Watch checks sub-band activity while receiving on another frequency, then when a signal is detected, shifts operation to

that frequency. Digital Battery Voltage displays current operating battery voltage. Digital Coded Squelch (DCS) silently monitors busy channels. Auto Range Transpond System™ (ARTS™) uses DCS to allow two radios to track one another. And, the FT-50RD is ADMS-1C Windows™ PC programming compatible, too. To round out the FT-50RD, it has four battery savers, and super loud audio—remarkable in an HT this size.

A reliable companion where ever you go, the FT-50RD is one tough little dual bander with all the features you want!

## YAESU

...leading the way™

For the latest Yaesu news; hottest products, visit us on the Internet! <http://www.yaesu.com>



### FT-10/40R

#### Ultra Compact Handhelds

VHF or UHF, Similar to FT-50RD including MIL-STD 810, and other exclusive features.



**NEW**  
Dual Band HT

# Dual Band Handheld FT-51R

Only one Dial/Volume knob  
required for easier use.

## The First Dual Band HT with WINDOWS!

Three dual receive configurations VHF/VHF, UHF/UHF, or VHF/UHF with main band frequency on right or left side. Flexible programming allows transmit on main or sub band.

An 8 character alpha-numeric user help menu scrolls operation instructions in the bottom of the large, backlit display.

**MH-29A2B**  
LCD Display Mic  
with Remote  
Functions.  
(Optional)

The new FT-51R  
Dual Band HT is  
state-of-the-art,  
and easy to use!

So easy, you won't need an operating manual. Its exclusive, scrolling instruction menu located in the large, backlit display "window", guides you through total operation while simultaneously viewing the main display window.

You'll like some of the other new, exclusive features, too. Like Spectrascope™. This unique feature displays real time, continuous scanning of activity on adjacent frequencies in VFO mode or 8 of your favorite

memories. A cloning feature duplicates favorite channels to another FT-51R.

A digital battery voltage display, five power output levels, the largest backlit dual band HT keypad made, Smart Mute™, two VFOs on both VHF and UHF, as well as available 2 Watt and 5 Watt versions, round out the exciting FT-51R. Plus, the optional MH-29A2B Display Microphone allows you to control volume and also access Memory, VFO, Call Channel, Band Selection and scanning functions. All of this in world's smallest dual band HT radio!

See the FT-51R with  
"windows" at your Yaesu  
dealer today!

"I can see two frequencies  
and alpha-numeric all at the  
same time."

"Scrolling instructions tell me  
what to do next!"



"I use the Spectrascope to  
find new contacts faster."

"Yaesu did it again!"

Digital battery voltage readout  
displays condition of battery in  
use. Scan skip function allows  
individual memory channel lock-  
out during scanning mode.

Spectrascope™ displays active  
adjacent frequencies in real time  
with relative signal strength.

**FT-51R**  
2 1/4"W x 4 1/4"H x 1 1/8"D  
(2 Watt version shown.)

### Specifications

- Frequency Coverage  
VHF RX: 110-180 MHz  
TX: 144-148 MHz  
UHF RX: 420-470 MHz  
TX: 430-450 MHz
- Spectrascope™ Display
- Scrolling User Help Menu
- Alpha-Numeric 8 Character Display
- Up/Down Volume/Squelch Controls & Display
- Selectable Sub-Band TX Mute
- Automatic Tone Search (ATS)
- Digital Battery Voltage Display
- AM Aircraft Receive
- Scanning Light System (SLS)
- 120 Memory Channels (80 w/Alpha-Numeric)
- Large Backlit Keypad & Display
- Automatic Repeater Shift (ARS)
- Multiple Scanning Modes
- 3 Selectable Scan Stop Modes with Scan Skip
- Selectable 6-way Lock Functions
- Automatic Power Off (APO)
- TX/RX Battery Savers Built-in
- Handy Cloning Feature
- 5 Selectable Power Output Levels
- 5 Watt and 2 Watt versions
- Selectable RX Smart Mute™
- Cross-Band & One-Way Repeat Functions
- DTMF Paging/Coded Squelch Built-in

#### Accessories

Consult your local dealer.

**YAESU**  
Performance without compromise.™

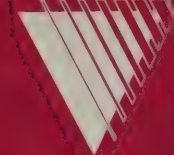
© 1994 Yaesu USA, 17210 Edwards Road, Cerritos, CA 90703 (562) 404-2700

Specifications subject to change without notice. Specifications guaranteed only within amateur bands. Some accessories and/or options are standard in certain areas. Check with your local Yaesu dealer for specific details.



# VXF-1

## Family Radio Service



**vertex**  
RADIO COMMUNICATIONS

# *Adventurer*

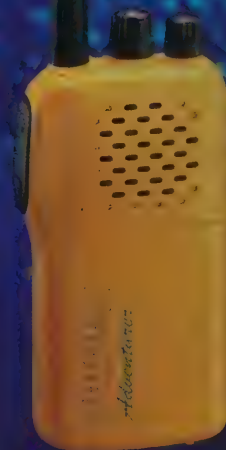
**14 CHANNEL  
DIGITAL CODED FRS TWO-WAY RADIO**

For Everyone ..... Car to Car Communication, Family Use, Vacation, Camping, Biking, Skiing, Hunting, Fishing, Hiking, Hang Gliding, Rock Climbing, Special Events, Light Industry, Warehouse, Construction, Stadiums, Restaurants, Parking Control, Security, Emergency Preparedness, Film & TV Production, Rental



ACTUAL SIZE

- No License Required
- Weather Resistant
- 500 mW Output Power/2 Mile Range
- Long Battery Life
- DCS (Digital Coded Squelch) / ARTS (Auto Range Transpond System) Included





# Rotators

You're looking at the only rotators manufactured by a major amateur radio communication company.

Who better to determine the best specifications and durability for precision amateur radio performance under all circumstances? Smooth and quiet without noisy wedge brakes, these rotators are housed in weatherproof, die-cast aluminum enclosures permanently lubricated for maintenance-free operation and years of service.

Compatible with most U.S.A. made antenna tower accessory shelves, Yaesu rotators come with a One-Year Warranty.

## Computer Controllers

Computer controllers for rotators now available.

**GS-23** Computer Controller for Rotators: G-800SDX, G-1000SDX, G-2800SDX.

**GS-232** Computer Controller for Satellite Rotator: G-5400B

Model	Application	Mast Size	Rotator Size	Pre-sets	Wind Load
<b>G-450XL</b>	Light/medium-duty	1 <sup>3</sup> / <sub>4</sub> -2 inches	12 <sup>1</sup> / <sub>2</sub> "H x 7 <sup>1</sup> / <sub>2</sub> " Dia.	No	10 Sq. Ft.
<b>G-800X</b>	Medium-duty	1 <sup>1</sup> / <sub>2</sub> -2 <sup>1</sup> / <sub>2</sub> inches	12 <sup>1</sup> / <sub>2</sub> "H x 7 <sup>1</sup> / <sub>2</sub> " Dia.	No	17 Sq. Ft.
<b>G-800SDX</b>	Medium-duty	1 <sup>1</sup> / <sub>2</sub> -2 <sup>1</sup> / <sub>2</sub> inches	12 <sup>1</sup> / <sub>2</sub> "H x 7 <sup>1</sup> / <sub>2</sub> " Dia.	Yes	17 Sq. Ft.
<b>G-1000SDX</b>	Heavy-duty	1 <sup>1</sup> / <sub>2</sub> -2 <sup>1</sup> / <sub>2</sub> inches	12 <sup>1</sup> / <sub>2</sub> "H x 7 <sup>1</sup> / <sub>2</sub> " Dia.	Yes	23 Sq. Ft.
<b>G-2800SDX</b>	Extra Heavy-duty	1 <sup>7</sup> / <sub>8</sub> -2 <sup>1</sup> / <sub>2</sub> inches	13 <sup>5</sup> / <sub>8</sub> "H x 8" Dia.	Yes	34 Sq. Ft.
<b>G-5400B</b>	Azimuth-Elevation Rotator combination	1 <sup>1</sup> / <sub>2</sub> -2 <sup>1</sup> / <sub>2</sub> inches (Boom Dia. 1 <sup>1</sup> / <sub>4</sub> -1 <sup>5</sup> / <sub>8</sub> in.)	Mounted together 12 <sup>1</sup> / <sub>2</sub> "H x 7 <sup>1</sup> / <sub>2</sub> " Dia.**	No	11 Sq. Ft.
<b>G-500A</b>	Elevation only	1 <sup>1</sup> / <sub>2</sub> -2 <sup>1</sup> / <sub>2</sub> inches (Boom Dia. 1 <sup>1</sup> / <sub>4</sub> -1 <sup>5</sup> / <sub>8</sub> in.)	10 <sup>1</sup> / <sub>2</sub> "H x 7 <sup>1</sup> / <sub>2</sub> " Dia.	No	12 Sq. Ft.

### G-2800SDX

The new top of the line rotator for extra heavy duty antenna installations. Maximum antenna wind load, 34 sq. ft.

### Accessories:

**GC-038** Mast Clamp, **GC-048** Mast Clamp, **GS-050** Thrust Bearing, **GS-065** Thrust Bearing, Not Shown: G-800S, G-800SDX, G-1000SDX,

\*Wind load ratings are valid when rotator is mounted in tower.

\*\*Rotator size mounted together.

### G-500A

Elevation rotator for space communication antennas. DIN connection provided for computer operation. Maximum antenna wind load, 12 sq. ft.

### G-5400B

Azimuth-Elevation combination for space communication antennas. DIN connection provided for computer operation. Maximum antenna wind load, 11 sq. ft.

### G-450XL

A new entry-level rotator priced low, for light to medium duty antennas. Maximum antennas wind load, 10 sq. ft.



# AMPLIFIERS

## AMERITRON



**AL-800** • Solid-state, no tune linear. Continuous coverage 1.5–22MHz; 10/12M with kit. 100W drive for 600W PEP SSB/500W CW output. Illuminated Cross-Needle SWR/Wattmeter. SWR & overload protection, ALC control. Transmit, ALC & SWR LED indicators. Separate 110/220V power supply. Both are 6"h x 9 1/2"w x 12"d, 48 lbs (total)..... **\$1129<sup>95</sup>**



AL-800/800H

AL-811/811H

**AL-800** • Covers 160-12M; modifiable for 10M Single 3CX800A7, 1200W output. **SPECIAL \$1399<sup>95</sup>**

**AL-800H** • Covers 160-12M; modifiable for 10M Two 3CX800A7 tubes, 1500W output..... **\$2049<sup>95</sup>**

**AL-811** • Low cost Desktop linear. Covers 160 to 12M; modifiable for 10M Uses three 811A tubes with tuned input to deliver 600W PEP SSB/500W CW output with 75W drive. Vernier drive plate tuning, illuminated grid and plate voltage/current meters, adjustable ALC. Built-in 110/220V power supply. 16"d x 13 1/2"w x 8"h, 40 lbs ..... **\$599<sup>95</sup>**

**AL-811H** • Similar to AL-811, but four 811A tubes for 800W PEP SSB output with 75W input. **\$729<sup>95</sup>**



**AL-80B** • Covers 160-15 meters including WARC and MARS; bands. Modifiable for 10/12 meters. Single 3-500Z; 85W drive produces 1KW PEP SSB and 850W CW output. Dual illuminated cross-needle meters, QSK compatible. Built-in 110/220V supply. 14"w x 8"h x 15 1/2"d, 52 lb..... **\$1149<sup>95</sup>**

AL-82  
AL-1200  
AL-1500  
similar in  
appearance



**AL-82** • Full legal! Covers 160-12M; modifiable for 10M. Two 3-500Z's; 100W drive for 1500W cont. output. Built-in supply w/Hypersil® transformer, 220V @ 15A. 10"h x 17"w x 18"d, 76 lbs.. **\$1899<sup>95</sup>**

**AL-1200** • Full legal output! Covers all ham bands 1.8–21MHz + WARC bands; owner modifiable for 10M. Single Eimac 3CX-1200A7 ceramic tube requires 100W drive for 1500W output. Heavy silver-plated tank components, built-in heavy-duty power supply with Hypersil® transformer, 220V–15A. 10"h x 17"w x 18"d, 83 lbs..... **\$1879<sup>95</sup>**

**AL-1500** • Full legal! Covers 160-12M; modifiable for 10M. Single Eimac 8877 ceramic tube delivers 1500W+ output with only 65W drive. Heavy-duty built-in power supply with Hypersil® transformer, 220V @ 15A. 10"h x 17"w x 18"d, 77 lbs. **\$2299<sup>95</sup>**

**AL-572** • Provides 1300W PEP SSB & 1000W CW power output 160 to 15M. (4) rugged Svetland Russian 572B tubes, near legal limit power & 3-second warm-up • Built-in multi-voltage AC supply • Lighted Cross-Needle meters • Dynamic ALC • Tuned 50Ω input • QSK Compatible • Fan Cooled Vernier Reduction drives on Plate & Load • 8 1/2"h x 15 1/2"d x 14 1/2"w..... **\$1299<sup>95</sup>**



## concept

**VHF/UHF AMPS**  
Single and Duobanders  
12V DC • FM/CW/SSB  
Receive preamplifier  
Overdrive protection

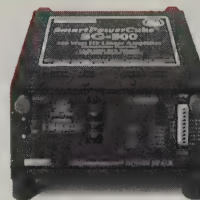


Model	input	output	amps	Price
<b>2-meters</b>				
MAXAMP-10	10W	150W+	25	319 <sup>95</sup>
MAXAMP-45	40W	150W +	22	289 <sup>95</sup>
<b>440MHz</b>				
4-110	10W	100W	22	359 <sup>95</sup>
4-310	30W	100W	20	339 <sup>95</sup>
<b>Dual Band - 2m/440 MHz</b>				
2/70G	3W/5W	30W/20W	6	259 <sup>95</sup>
<b>Mini-AMPS</b>				
144P	2W	30W	6	119 <sup>95</sup>
440P	3W	20W	6	149 <sup>95</sup>

## SGC

**SG-500**  
SmartPowerCube™

A fully automatic band switching, microprocessor controlled HF Linear Amplifier. Covers 1.6–24 MHz, ideal for fixed, mobile, & marine operation. Rugged, nearly indestructible! Cast-aluminum enclosure, extra heavy duty heat sinks, powder coat finish and durable electronic components. 500W PEP output with 50 to 90W input; CW rating is 500W output for 10 minutes, or unlimited with an optional fan. 10–18.0 VDC @ 40A average (SSB), 90A peak, or CW. 6"h x 12 1/2"d x 11 1/2"w, 21 lbs.....52-96 **\$999<sup>95</sup>**



New  
from

## YAESU

### QUADRA SYSTEM HF/6-METER AMPLIFIER

- Amateur Band Coverage: 160–15 & 6 meters
- 1000W Power Out @ 220V AC  
500W on 6-meters
- (8) MRF150 Power MOS FETs
- Multi-function Omni-Glow LCD Display
- Automatic System Monitoring with VSWR Protection
- Built-in High-Speed Antenna Tuner
- (2) RF inputs • (4) RF outputs
- Automatic Bandswitching with Yaesu's FT-1000D, FT-1000MP, FT-920 & FT-900
- (2) input voltages: 117VAC for 500W; 220V AC for 1000W
- Separate Amplifier and Power Supply Units
- Size: (each) 16 1/2" x 5 1/2" x 16 1/2"
- Weight: (Amp) 33 lbs; (Power Supply) 26 lbs

**\$4999<sup>95</sup>**

**ALS-500M** • No tune-up, solid-state FET linear amplifier. Ideal for high-powered mobile operation. Continuous coverage 1.5 to 22MHz; 10/12M with optional kit. Four 2SCC2879's deliver 500W PEP SSB & 400W CW with less than 100W drive. SWR & overload protection, remote ON/OFF control. Requires 13.8VDC @ 80A peak for PA & 12 to 15VDC @ 4A for control & bias. 3 1/2"h x 9"w x 15"d, 7 lbs..... **\$699<sup>95</sup>**



## MIRAGE VHF/UHF AMPLIFIERS

Add a MIRAGE amplifier to your rig for 30 to 600 watts of BRUTE POWER! Models for 6 meters through 70 cm – Base, Mobile, Repeater or ATV operation. **Features:** • 12V DC • FM/SSB/CW modes • Continuous duty • 20dB GaAsFET preamp • Overdrive and High-temperature protection • Remote control capability

Model	MHz	input	out	amps	preamp	SALE
A-1015G	50-54	10W	150W	23	yes	\$349 <sup>95</sup>
B-34	144-148	2W	30W		no	69 <sup>95</sup>
B-34G	144-148	2W	30W		yes	89 <sup>95</sup>
BD-35	144/440		45/25W		no	149 <sup>95</sup>
B-215G	144-148	2W	150W	20	yes	339 <sup>95</sup>
B-1016G	144-148	10W	160W	25	yes	339 <sup>95</sup>
B-1030G	144-148	10W	300W	48	yes	619 <sup>95</sup>
B-1060G	144-148	10W	600W	52*	yes	989 <sup>95</sup>
B-310G	144-148	4W	100W		yes	179 <sup>95</sup>
B-2516G	144-148	30W	160W	25	yes	269 <sup>95</sup>
B-2530G	144-148	30W	300W	48	yes	619 <sup>95</sup>
B-2560G	144-148	25W	600W	52*	yes	989 <sup>95</sup>
B-5016G	144-148	50W	160W	24	yes	269 <sup>95</sup>
B-5030G	144-148	50W	300W	48	yes	599 <sup>95</sup>
B-5060G	144-148	50W	600W	45*	yes	989 <sup>95</sup>
C-22G	222-225	2W	20W	5	yes	\$154 <sup>95</sup>
C-211G	222-225	2W	110W	20	yes c/o	259 <sup>95</sup>
C-106G	222-225	10W	60W	12	yes	214 <sup>95</sup>
C-1012G	222-225	10W	120W	5	yes	299 <sup>95</sup>
C-1022G	222-225	10W	220W	20*	yes	589 <sup>95</sup>
C-2512G	222-225	30W	120W	20	yes	289 <sup>95</sup>
C-2522G	222-225	30W	200W	42	yes	589 <sup>95</sup>
C-5012G	222-225	50W	120W	20	yes c/o	239 <sup>95</sup>
C-5022G	222-225	50W	240W	42	yes c/o	469 <sup>95</sup>
D-15N	425-450	2W	15W	3	no	\$169 <sup>95</sup>
D-26N	430-450	2W	60W	12	no	244 <sup>95</sup>
D-1010N	430-450	10W	100W	15	no	354 <sup>95</sup>
D-3010N	430-450	30W	100W	20	no	329 <sup>95</sup>
D-100-ATVN	430ATV	1W	52W	20	no c/o	329 <sup>95</sup>
D-1010ATVN	430ATV	10W	100W	20	no	369 <sup>95</sup>

\*at 28VDC N denotes Type-N connectors

**RC-1 Remote Control Head** • for all Mirage amplifiers except the B-23S, B-23G, C-22G and D-26N. .... **\$45<sup>95</sup>**

## MAHA

### DOCKING BOOSTERS

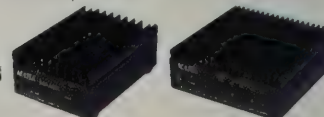
With the appropriate adapter, you can slide on & boost your ICOM, KENWOOD or YAESU handheld radio up to 50W. Forget about the battery pack, the booster will power the HT at 5W. Also works w/RADIO SHACK HTX-202 and ADI.



**MH-A301** • 2m FM, 5W in/35W out, 18dB GaAsFET preamplifier ..... **\$115<sup>95</sup>**

**MH-A302** • Dual Bander –2m 5W in/45W out; 440MHz, 5W in/35W out..... **\$165<sup>95</sup>**

### HT AMPLIFIERS



**MH-A101** • 2m FM, 5W in/35W out..... **\$69<sup>95</sup>**

**MH-A102** • 2m FM/SSB, 5W in/45W out, 15dB GaAsFET preamplifier..... **\$89<sup>95</sup>**

**MH-A103** • 2m FM/SSB, 5W in/50W out, 15dB GaAsFET preamplifier ..... **\$119<sup>95</sup>**

**MH-A104** • 2m FM/SSB, 5W in/100W out, 15dB GaAsFET preamp, adjustable... **\$229<sup>95</sup>**

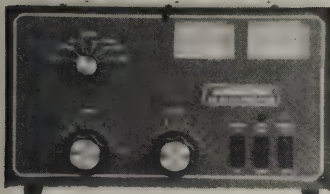
**MH-A201** • Dual Bander –2m 5W in/45W out; 440MHz 5W in/35W out..... **\$159<sup>95</sup>**



**AMERITRON**

# AL-811H... 800 Watts... \$729<sup>95</sup>

Ameritron gives you four 811A tubes, 800 watts and far better quality -- for less money -- than a competitor's 3 tube 600 watt unit... Why settle for less power, less quality and pay more money?



AL-811H  
**\$729<sup>95</sup>**  
AES PRICE

AL-811  
**\$599<sup>95</sup>**  
AES PRICE

## Kilowatt Amplifier



AL-80B  
**\$1149<sup>95</sup>**  
AES PRICE

Get a full kilowatt PEP output from a whisper quiet desktop linear. It's a compact 8 1/2 x 14 x 15 1/2 inches and plugs into your nearest 120 VAC outlet. Covers all bands 160-15 Meters, 850 watts out on CW, genuine 3-500 tube, nearly 70% efficiency, inrush current protection, multi-voltage transformer and more!

Only the Ameritron AL-811H gives you four fully neutralized 811A transmitting tubes. You get absolute stability and superb performance on higher bands that can't be matched by un-neutralized tubes.

Ameritron mounts the 811A tubes vertically -- not horizontally -- to prevent hot tube elements from sagging and shorting out. Others, using potentially damaging horizontal mounting, require special 811A tubes to retard sagging and shorting.

A quiet, powerful computer grade blower draws in

## Near Legal Limit™ Amp



AL-572  
**\$1299<sup>95</sup>**  
AES PRICE

PEP SSB and 1000 Watt CW output, 160-15 Meters, 4 rugged Svetlana Russian 572B tubes, Near Legal Limit™ power and 3-second warm-up. Built-in multi-voltage AC supply, lighted Cross-Needle meters, dynamic ALC, tuned 50 Ohm input, QSK compatible, fan cooled vernier reduction drives on plate and load. 8 1/2 x 15 1/2 x 14 1/2 w.

plenty of cool air. It pressurizes the cabinet and efficiently cools your 811A tubes. Our air flow is so quiet, you'll hardly know it's there -- unlike noisy, poorly chosen blowers.

You also get efficient full size heavy duty tank coils, full height computer grade capacitors, heavy duty high silicon core power transformer, slug tuned input coils, operate/standby switch, transmit LED, ALC, dual meters, QSK compatibility with QSK-5 plus much more.

AL-811 has three 811A tubes and gives 600 Watts output for only \$599.95.

## AMERITRON offers the best selection of legal limit amplifiers

AMERITRON's legal limit amplifiers use a super heavy duty Hypersil® power transformer capable of 2500 watts!

### Ameritron's most powerful Linear

AL-1500  
**\$2299<sup>95</sup>**  
AES PRICE

Ameritron's super powerful amplifier uses the herculean Eimac® 8877 ceramic tube. It's so powerful that 65 watts drive gives you the full legal output -- and it's just loafing because the power supply is capable of 2500 Watts PEP.

### Ameritron's 3CX1200A7 linear Amp

AL-1200  
**\$1879<sup>95</sup>**  
AES PRICE

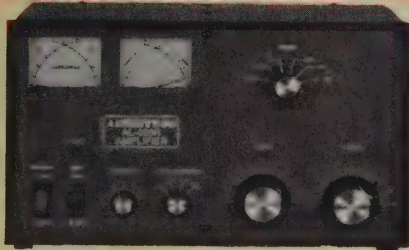
Get ham radio's toughest tube with the Ameritron AL-1200 -- the Eimac 3CX1200A7. It has a 50 watt control grid dissipation. What makes the Ameritron AL-1200 stand out from other legal limit amplifiers? The answer: A super heavy duty power supply that loafs at full legal power -- it can deliver the power of more than 2500 watts PEP two tone output for a half hour.

### Ameritron's dual 3-500 linear

AL-82  
**\$1899<sup>95</sup>**  
AES PRICE

This linear gives you full legal output using a pair of 3-500s. Most competing linears using 3-500s can't give you 1500 watts because their lightweight power supplies can't use these tubes to their full potential.

## AMERITRON HF Linear Amps with Eimac™ 3CX800A7



AL-800H  
**\$2049<sup>95</sup>**  
Two tubes  
1500 Watts plus

AL-800  
**\$1429<sup>95</sup>**  
Single tube  
1250 Watts

AMERITRON's new 800/H amplifiers cover 160-15 Meters including WARC bands. The AL-800 has a single Eimac™ 3CX800A7 tube and produces 1250 Watts PEP. The AL-800H has two 3CX800A7s giving 1500 Watts plus.

Both amps have an adjustable slug tuned

input circuit, grid protection, ALC control that is front panel adjustable, vernier reduction drives, heavy duty 32 pound grain oriented silicone steel core transformers and high capacitance computer grade filter capacitors.

These amplifiers have multi-voltage operation (14 user selectable AC line voltage from 90-140; 200-250 VAC), quiet pressurized ventilation systems, dual illuminated Cross-Needle meters that read peak forward and reflected power, SWR, high voltage, grid current and plate current.

Vernier reduction drives make tuning adjustments smooth and easy. Ameritron's exclusive Step-Start Inrush Protection™ stops damage to your amplifier from inrush current. Ameritron amps feature an attractive Lexan front panel decal and superior, all metal construction -- it's built to last! Ultra compact desktop size is perfect for your operating station. 8 1/2 x 16 1/2 x 14 1/4".

## AMERITRON no tune Solid State Amplifiers

Ameritron ALS-500M Mobile no tune Solid State Amp has 500W out, covers 1.5-22 MHz

Ameritron ALS-600 no tune Solid State base amp includes heavy duty power supply, 600 Watts out



ALS-500M  
**\$699<sup>95</sup>**  
Ideal Mobile amplifier  
AES PRICE -- uses

13.8 Vdc mobile electrical system, very compact 3 1/2 x 9 x 15 in., extremely quiet, 500W output, 1.5-22 MHz coverage, instant bandswitching, no tuning, no warm up, no tubes, SWR protected.



ALS-600  
**\$1129<sup>95</sup>**  
AES PRICE

power supply, 600 W output, continuous 1.5-22 MHz coverage, instant bandswitching, fully SWR protected, extremely quiet, very compact. Amp is 6x9 1/2 x 12 inches.

## AMERITRON brings you the finest high power accessories!

### RCS-8V Remote

Coax Switch... \$139<sup>95</sup>  
Replace 5 coax feedlines with a single coax. 1.2 SWR at 250 MHz. Useable to 450 MHz. 1kW at 150 MHz. RCS-4, \$129.95. 4 position remote HF switch.

### ADL-1500 Dummy Load

with oil... \$59.95  
Oil cooled 50 ohm dummy load handles 1500 W for 5 minutes. SWR under 1.2 up to 30 MHz. Low SWR to 400 MHz.

### ICP-120/240

\$79<sup>95</sup>  
Stops power-up inrush current and absorbs momentary high voltage spikes to your amplifier. ICP-120 for 110-120V, ICP-240 for 220-240 V.

### ATR-15 Legal Limit

Antenna Tuner... \$369<sup>95</sup>  
Designed for legal limit amplifiers! Covers 1.8-30 MHz, peak reading SWR/Wattmeter, 6 pos. antenna switch, 1:1 or 4:1 balun.

### ARB-700 amp-to-radio

interface... \$29.95  
Protects your costly transceiver from damage by keying line transients, steady state current and excessive voltages.

### QSK-5 Pin Diode T/R

Switch... \$329<sup>95</sup>  
Self-contained, connects externally to most HF amps. Handles 2.5 KW PEP, 2 KW CW. Six times faster than vacuum relay. 6x4x9 1/2 in.

**More hams use AMERITRON amps than any other in the world!**

Why? AMERITRON has earned a worldwide reputation for legendary quality, flawless performance, proven reliability and superb customer service... Call Amateur Electronic Supply for the best price and quick delivery!

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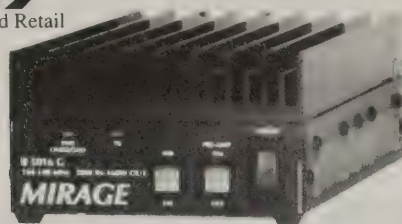
## Free Catalog: 800-647-1800



# MIRAGE ... 160 Watts on 2 Meters!

Turn your mobile, base or handheld into 160 Watt powerhouses and talk further, longer, clearer... All modes: FM, SSB, CW... Superb GaAsFET preamp... More!

B-5016-G  
\$269<sup>95</sup>  
Suggested Retail



The MIRAGE B-5016-G gives you 160 watts of brute power for 50 watts input on all modes -- FM, SSB or CW!

Ideal for 20 to 60 watt 2 Meter mobile or base. Power Curve chart shows typical output power.

Hear weak signals -- low noise GaAsFET preamp gives you excellent 0.6 dB noise figure. Select 15 or 20 dB gain.

B-5016-G has legendary ruggedness. We know of one that has been in constant use since 1979!

Heavy-duty heatsink spans entire length of cabinet -- prevents overheating. Power transistors protected by MIRAGE's Therm-O-Guard™.

Fully protected from high SWR and excessive input power. Has warning LED.

Has smooth adjustable Transmit/Receive

switching with remote external keying.

RC-1, \$45.95, Remote Control. On/Off, pre-amp On/Off, selects SSB/FM. 18-ft cable.

Draws 17-22 amps at 13.8 VDC. 12x3x5 1/2 in.

**More 160 Watt, 2 Meter Amplifiers...**

B-2516-G, \$269.95. For 10 to 35 watt mobile or base stations. 160 watts out for 25 watts in.

B-1016-G, \$339.95. MIRAGE's

most popular dual purpose

HT or mobile/base amplifier.

160 watts out/10 W in.

For 0.2-15 watt transceivers.

B-215-G, \$339.95. MIRAGE's most popular handheld amp. 150 watts out/2 watts in; 160 watts out/3 1/2 W in. For 0.25 to 5 watt HTs.

**B-1016-G  
Great for ICOM  
IC-706!**

Power Curve -- typical B-5016-G output power

Watts Out	130	135	140	145	150	155	160	160+
Watts In	20	25	30	35	40	45	50	55

## 144/440 MHz Amp 45/35 Watt Dual Band

BD-35  
\$149<sup>95</sup>



Power Curve -- typical BD-35 output power

Watts Out (2Meters)	30	40	45	45+	45+	45+	45+
Watts Out (440 MHz)	16	26	32	35+	35+	35+	35+
Watts In	1	2	3	4	5	6	7

- 45 Watts on 2 Meters/35W on 440 MHz
- Auto Band Selection
- Full Duplex Operation
- FREE mobile bracket
- Single connector for dual band radios
- Reverse polarity protection
- Works with all FM handhelds up to 7 watts
- Auto T/R Switch • "On Air" LEDs
- 5x1 1/2 x 5 inches

## 6 Meter Amplifier (50-54 MHz)

FCC Type Accepted



The A-1015-G, \$349.95, is the world's most popular all mode FM/SSB/CW 6 Meter

amplifier. 150 watts out for 10 in. For 1 to 15 watt transceivers.

## 35 Watts for 2 Meter HTs

B-34-G  
\$89<sup>95</sup>



• 35 Watts Out-2 M • All modes: FM, SSB, CW

• 18 dB GaAsFET preamp

• Reverse polarity protect • Works w/HTs to 8W

• B-34... 35 W, FM only, less preamp... \$69.95

## Low noise GaAsFET preamps

High gain ultra low noise GaAsFET preamps for receiving weak signals. Selectable gain prevents receiver intermod. 15 to 22 dB gain. Less than 0.8 dB noise figure. Automatic RF switching up to 160 Watts. Choose In-Shack model or Mast-Mount (includes remote control) model to reduce loss. Rugged die-cast enclosure.

Frequency (MHz)	In Shack	Mast Mount
28-30	KP-1/10M	KP-2/10M
50-54	KP-1/6M	KP-2/6M
144-148	KP-1/2M	KP-2/2M
220-225	KP-1/220	KP-2/220
430-450	KP-1/440	KP-2/440

## 100 Watts for 2 Meter HTs

B-310-G  
\$179<sup>95</sup>



Power Curve -- typical B-310-G output power

Watts Out	25	50	75	95	100	100+	100+
Watts In	1/4	1/2	1	2	4	6	8

- 100 Watts out with all handhelds up to 8 watts
- All modes: FM, SSB, CW
- Great for ICOM IC-706
- 15 dB low noise GaAsFET preamp
- Reverse polarity protection/SWR Protection

## One Year Mirage Warranty

- Commercial Amplifiers • 223-225 MHz
- 420-450 MHz • SWR Wattmeters

Free Catalog: 800-647-1800

# MIRAGE

COMMUNICATIONS EQUIPMENT  
300 Industrial Park Road  
Starkville, MS 39759, USA

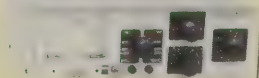
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# VECTRONICS®

... the finest amateur radio products made!

## World's most versatile 300W Antenna Tuner



VC-300DLP You'll get everything you've ever wanted... precise inductance control that rivals roller inductors... the ability to match any real antenna... full 1.8-30 MHz coverage... peak reading backlit Cross-Needle Meter... 8 position antenna switch... built-in 50 Ohm dummy load... finest components available and world class quality.

## More Fine Amateur Products

- AT-100 Tuned Active SWL Antenna... \$79.95
- CK-200 Deluxe CW Keyer w/Curtis chip... \$79.95
- DL-300M 300 Watt Dry dummy load... \$34.95
- DL-650M 1500 Watt Dry dummy Load... \$64.95
- DL-2500 2500 W dry DL w/cooling fan - \$179.95
- VC-300M 300 Watt Mobile Tuner... \$99.95
- VC-300D 300 W Tuner w digital graph - \$179.95
- HPF-1 High Pass TVI filter 52-550 MHz... \$19.95
- HPF-2 Deluxe high pass TVI filter... \$24.95
- PM-30HF 1.8-60 MHz SWR/Wattmeter... \$79.95
- PM-30UV 144/220/440 SWR/Wtmtr... \$89.95
- LP-30 Low Pass filter, handles 1500 Watts... \$49.95
- LP-2500 Low pass filter, 2500 Watts... \$79.95
- PS-30F 25 amp power supply, 30A surge... \$129.95
- PS-50F 35 amp power supply, 50A srg... \$199.95

## 3 KW Roller Inductor Antenna Tuner with SSB Digital Bar Graph

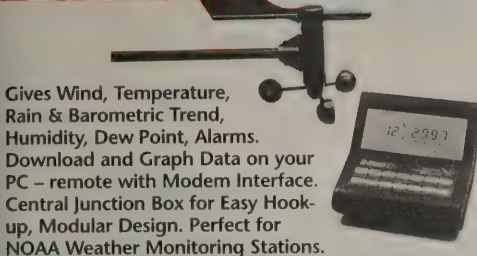


HFT-1500 The VECTRONICS HFT-1500 has three continuously variable components -- two 4.5 kV capacitors and a roller inductor controlled by a precision crafted crank handle and a gear driven 5-digit counter. Tune any antenna 1.8-30 MHz, Lighted D'Arsonval Cross-Needle SWR/Wattmeter, 28 uH roller inductor, 4:1 2.5 kW balun and 20 segment SSB bar graph display.

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Gives Wind, Temperature, Rain & Barometric Trend, Humidity, Dew Point, Alarms. Download and Graph Data on your PC - remote with Modem Interface. Central Junction Box for Easy Hook-up, Modular Design. Perfect for NOAA Weather Monitoring Stations.

**Model 7440 Weather Monitor II**  
Top-of-the-line Personal Weather Station that combines all weather monitoring functions and a 12 or 24 hour clock with date, into one package and shows them on an easy-to-read, back lit, 1 1/2" x 4 3/4" LCD display. **Temperature:** Indoor, from 32°F to 140°F **Wind:** Wind Direction in 1° or 10° increments • Speeds to 175 mph • High Wind Speed • Wind Chill to -134°F • Low Wind Chill **Barometer:** Barometric Pressure (with memory recall) • Trend arrow **Humidity:** Inside Humidity 10% to 90% (outside optional) • High and low Humidity **Alarms:** Temperature, Wind Speed, Wind Chill, Humidity, and Time. Barometric trend alarm for change >.02, .04, or .06 inches of mercury in an hour **Other Features:** Compact, 5 1/2" x 5 1/2" x 3" • Scans selected functions • Metric/U.S. units • AC operation w/batt. back-up • Use on desk, shelf or wall ..... **\$349<sup>95</sup>**

**External Temperature/Humidity Sensor** For the 7440; measure outside humidity, dew point and temperature. Comes with 40 ft. cable **Model 7859 \$109<sup>95</sup>**

**Model 7425 Weather Wizard III**  
Monitor both Indoor and Outdoor weather conditions at the touch of a button on the 1 1/2" x 4 3/4" LCD display. With the optional Rain Collector, measure daily and accumulated rainfall. Optional WeatherLink software will process and store weather data through an IBM compatible PC or Macintosh. With anemometer, external temperature sensor, junction box, cables & AC adapter.

**Temperature:** Indoor, 32°F to 140°F • Outdoor, -50°F to 140°F • High and Low Temperature **Wind:** Direction in 1° or 10° increments • Speeds to 175 mph • High Wind Speed • Wind Chill to -134°F • Low Wind Chill **Alarms:** Temperature • Wind Speed • Wind Chill • Time. **Other:** Compact, just 5 1/2" x 5 1/2" x 3" • Scans selected functions • Metric or U.S. units • AC operation with back-up • Desk, shelf or wall mount ..... **\$169<sup>95</sup>**

**Model 7415 Weather Wizard IIS**  
Like Weather Wizard III, but does not show Wind Direction, and the LCD display is smaller..... **\$129<sup>95</sup>**

**Rain Collector II** For 7440, 7425 & 7415; read both daily & accumulated rainfall in 0.01" increments. Comes with 40ft cable..... **Model 7852 \$69<sup>95</sup>**

**Model 7400 Perception II**  
Monitors indoor climate, looks similar to Weather Wizard III. **Functions:** Temperature 32°F-140°F • High/Low Temperature • Barometric Pressure w/Memory Recall • Humidity • Highs & Lows recorded with time & date • **Alarms:** Temperature, Humidity, Time, Barometric Change >.02, .04, or .06 inches of Hg/hr • 12/24 hr clock w/date • Backlit display **\$129<sup>95</sup>**

**40 ft. Extension Cables**  
4-conductor, for anemometer, ext. temperature sensor, rain collector, or WeatherLink..... **Model 7876 \$18<sup>95</sup>**  
6-conductor, for use with the external temperature and humidity Sensors, only..... **Model 7878 \$22<sup>95</sup>**

**Model 0281 Wind Wizard™**  
**Wind Speed Indicator**  
Handheld unit accurately measures wind speed from 0-60 MPH. No batteries required..... **\$44<sup>95</sup>**

**WEATHERLINK® 4**  
**Software for Windows**  
Link Perception, Weather Wizard, or Weather Monitor to your computer. Create graphs, calculate average conditions, generate summaries, analyze trends, more.

See DAVIS in the Price List

**Global Positioning Satellite (GPS) brings Satellite Navigation within reach of everyone! For navigation, hunting, etc. - tells you where you are, and how to get back. Interfaces with GPS capable TNCs for APRS packet operation. Check location of transmitter sites, repeaters and get data for satellite and moon-bounce work. Calculates the phase of the moon, and sunrise/sunset for anywhere on earth!**

**GPS-2000 Satellite Navigator**  
• Four convenient, easy-to-understand graphic navigation screens • Displays distance to go, direction, time to go, speed, course correction and other data • 100 user-entered landmarks • One reversible route of up to 29 legs • Displays position information in Latitude & Longitude or UTM coordinates • Crisp, backlit graphic display • Waterproof, rugged and durable case • Highly sensitive built-in antenna • Up to 24 hours of continuous battery life on 4-AA alkaline batteries • Hand-held, light weight, only 10 ounces and 6.6"h x 2.3"w x 1.3"d • 14°F to 140°F operating temperature range..... **\$149<sup>95</sup>**

**GPS-4000XL/12**  
Gets you there and back again with enhanced features: • 24-hour continuous use battery life • Allview 12 GPS technology - tracks 12 satellites • Waterproof construction • Rubberized armored housing & scratch-proof display • Mapping features, PC upload/download capability with optional kit • Seven graphic navigation screens; two customizable • Full-featured track plotter with landmark projection • Save 200 landmarks and 5 routes with 20 legs • Ability to attach a 20-character message to 25 landmarks • Auto backtrack feature • NMEA output 0183 and DGPS ready • Sunrise, sunset and lunar calculations • Latitude/Longitude, UTM, OSGB and other coordinates systems • 14°F to 140°F operating range • Simulator for training • Pocket size, only 6.6"h x 2.3"w x 1.3"d, 10 oz ..... **\$249<sup>95</sup>**

**Meridian XL**  
Six, customizable, easy-to-follow graphic navigation screens • Widescreen backlit display with ultra-large, bold characters for easy viewing • Detachable antenna, large keys & non-skid rubber grips • Position & waypoint information displayed in LAT/LON and TDs • Full-featured track plotter with adjustable scale, waypoint information, Pan & Scan and "Go To" features • Displays distance to go, bearing, COG, time to go, SOG, XTE, VMG & other data • "Go To" with MOB function • 200 user entered waypoints with 9 selectable icons • Waypoint projection and nearest waypoint search • Five reversible routes of up to 15 legs • Sunrise/sunset/lunar calculations • External alarm support • Ships with mounting bracket, carrying case, 10-35VDC power/data cable, lanyard strap • Up to 6 hours continuous of operation and 24 hrs in battery saver mode, on 3-AA batteries. • Rugged, durable, waterproof • 14oz, 6.13"h x 3.5"w x 1.3"d **\$299<sup>95</sup>**

**Pioneer** (not pictured) **New! - The First GPS Receiver under \$100**  
Tracks 12 satellites • 100 landmarks • 1 route, 10 legs • 3 graphic navigation screens • Water proof construction • Rubber armoring • Super strong antenna • Pocket-sized 6.25"h x 2.2"w x 1.1"d..... **\$99<sup>95</sup>**



GPS2000 GPS4000XL Meridian XL

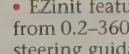
**Garmin's Personal Navigator GPS receivers are low-cost and full-featured. This family of satellite navigation equipment can guide you anywhere you want to go.**



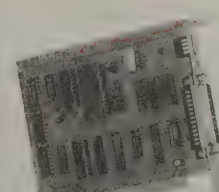
**GPS-12XL** Features a powerful 12 channel receiver for fast, accurate positioning. Designed for boaters, hunters and hikers who use a GPS in the most challenging environments.  
• PhaseTrac 12 parallel channel receiver for fast position fixes in the toughest conditions including tree canopy and urban obstructions • Rugged, compact case that meets military 810(e) specifications • External antenna and internal beeper alarm • 500 user waypoints with alphanumeric name and user comments • 20 reversible routes of up to 30 waypoints each • TracBack navigation automatically turns your track log into a route back home • 9 proximity waypoint alarms • Over 1000 track log points position averaging, emergency erase, and cloning features • Up to 12 hours battery life on four AA batteries (not supplied)..... **\$299<sup>95</sup>**



**GPS-38** A lightweight, proven receiver in a compact package - all at a very affordable price. Features an enhanced operating system that includes:  
• EZinit for quick and easy first time initialization • Backtrack—an extension of the route feature that allows users to exactly re-trace their course • Compass navigation "page" that depicts a rotating compass dial, displaying a track-up indication of the direction you are heading • Redesigned moving map allows a larger presentation by only showing the information pertinent to that trip • Eleven user selectable grid formats • Improved screen readability ..... **\$179<sup>95</sup>**



**GPS-III** Designed with over-the-road and off road adventures in mind. Features a state-of-the-art two-way screen display for vertical or horizontal orientation. Has an external antenna for improved reception, dedicated zoom keys, diagonal panning, auto start/stop trip timer and average and maximum speed recordings.  
• Operating system continuously tracks and uses up to 12 satellites • Rocker keypad, backlit LCD display, full featured moving map plotting • EZinit feature for fast "point-and-shoot" initialization • Dedicated keys for zooming from 0.2-360 miles • User selectable navigation screens for compass or graphic highway steering guidance • Filps horizontal or vertical with push of a button ..... **\$419<sup>95</sup>**



**UNIFIED MICROSYSTEMS**  
**W9XT Contest Card for IBM™ & PC Compatible**  
A non-volatile 5" x 4 1/2" card that plugs into a single 8-bit PC slot and provides voice recording, playback & CW keying. Stores 16 seconds of high quality and natural sounding voice audio sampled at 8kHz, which can be partitioned between 4 messages of different lengths. Does not

use any disk space. On CW, the card frees up the PC port, and a relay allows operation with positive or negative-keying. Works with all rigs and is compatible with popular logging programs..... **\$149<sup>95</sup>**  
**Contest Card Cable Semi-kit** Comes wired & tested except for connectors to microphone & transmitter. 6 ft. shielded cable, includes CW keying line and record switch. Specify 4 or 8-pin..... **\$44<sup>95</sup>**



# When Measurements Matter... Choose Bird!



**Model 43:** The "Industry Standard" average-reading RF power meter for CW and FM.

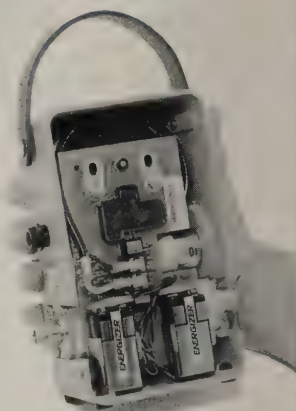
**Model 43P:** Model 43 with added capability of true peak power readings for AM and SSB signals.

Over 45 years ago, we invented THRULINE® technology. Since then, Bird Wattmeters have become the first choice of discriminating broadcasters and operators worldwide.

## Here's why:

- $\pm 5\%$ -of-Full-Scale Accuracy ( $\pm 8\%$  for Model 43P in peak-reading mode).
- Never Obsolete – Plug-in Elements cover 0.1W to 10kW and 450kHz to 2.7GHz.
- High Resale Value.
- Legendary Durability, Quality and Ease of Use.

Why settle for less? When *your* measurements matter, trust the original. Contact your local Bird dealer or the factory for details on the complete line of Bird products.



**Model 4300-400:** Peak-Reading Kit converts the Model 43 to 43P in minutes, without soldering.

See Bird Listing on  
p. 48 and in the  
Price List

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Electronic Corporation

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Phone: (440) 248-1200 FAX: (440) 248-5426



## AH-50 6 Meter Transceiver

### Features:

- Complete Band Coverage (50 to 54 MHz)
- Backlit LCD Information w/Function Indicators
- Frequency Scanning scans the entire 6 Meter band
- Full 5 Watts Output Power Standard
- Selectable 1 Watt Low Power Mode
- CTCSS Tone Frequencies for Privacy
- Sealed Rechargeable Nickel Cadmium Battery Pack Included
- Five Programmable Memories for Quick Access
- Full Normal and Reverse Repeater Functions at 500 kHz & 1 MHz
- Battery Power Saver Feature with Low Battery Indication
- Optional MA-27 adapter allows Mobile Operation
- Full One Year Warranty
- Convenient Small Size: 6" h x 2½" w x 1¼" d
- Accessories Include: Flexible Antenna, Ni-Cad Battery Pack, Power Adapter, Battery Charger, Belt Clip and Wrist Strap

**\*209\***

**CHEROKEE™**

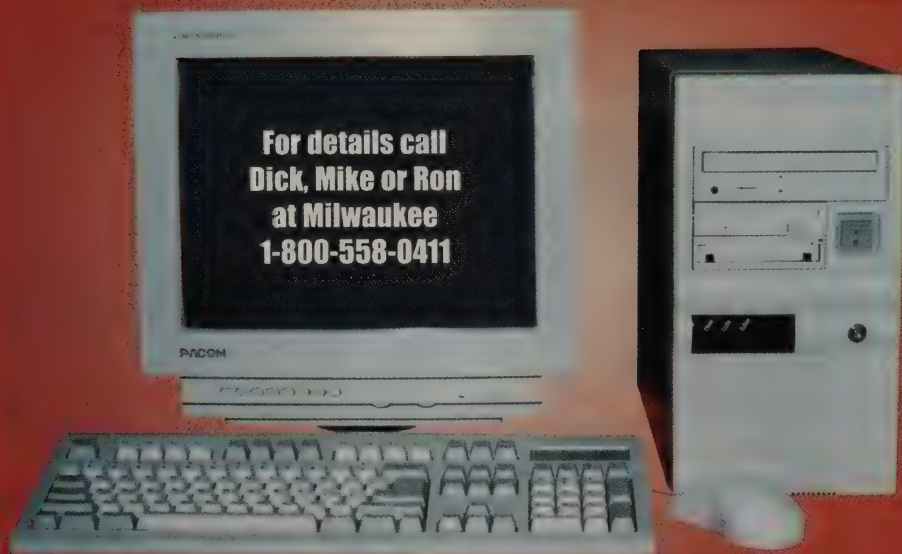
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# AES® IBM™ - PC Compatible PENTIUM BASED COMPUTER SYSTEMS



AES is offering state-of-the-art systems designed by you. No need to buy components you don't need or want. Call today for bottom line pricing on

## YOUR DESIGN

- Mini, Mid, full tower and desk top cases
- Pentium motherboards
- CPU's from 133 to 233 MHz MMX technology by Intel AMD or Cyrix
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- Floppy drives
- Hard drives 1 GB to 7 GB
- Video Cards S3 Diamond Matrox and more
- CD ROMs to 24x
- Sound Cards ESS Creative Labs and more
- Keyboards Keytronics Ace Fujitsu
- Mice Microsoft Logitech
- Modems US Robotics and others
- Tape Drives Seagate HP Colorado Conner
- Monitors 14" to 21"
- Many other items and brands to choose from
- Maximum

## PERFORMANCE



### AT1500 (bottom)

A solidly constructed high power antenna tuner using 10 ga. (.090) aluminum for the case and a "beefed up" roller constructed from 10 ga. tin plated wire on a DELRIN coil former. Designed by Paul Hrivnak (founder and former owner of "VECTRONICS") this unit is built to last.

- Matches dipoles, center fed doublets, G5RV's balanced feeders, Verticals, single wire, delta loops beams, windoms, Inverted V's
- Built in 4:1 balun for balanced wire feeders
- Bypass position for quick straight through antenna connection but still with SWR/POWER monitoring
- 6 position antenna selector switching
- Average power reading to 3000 watts
- Standing Wave Radio measurements with an illuminated cross-needle meter

### SPECIFICATIONS

- Frequency .....1.8-30MHz
- Power Rating .....1000W single tone  
1500W pep
- Antenna Matching .....2 air variables  
(4.5kv)  
Rotary Inductor with 10 ga. wire
- Meter .....Dual crossneedle yellow face,  
9-12dc for lamp
- Balun .....Ruthroff 4:1 balun included
- Dimensions .....4.5"H x 12.5"W x 11.5"D
- Weight .....11.5 lbs.
- Approvals .....CE approved

**\$379<sup>95</sup>**

### AT300 (top)

A compact antenna tuner that provides adjustable impedance matching for all types of antenna. It measures power & SWR using illuminated frequency compensated SWR/POWER single analog meter. CN model (middle) has cross-needle meter.

Using a 48 position switched toroidal inductor with silver plated double contacts it is possible to easily adjust for lowest possible SWR ratio on the selected transmit or received frequency.

- Matches dipoles, center fed doublets, G5RV's balanced feeders, Verticals, single wire, delta loops beams, windoms, Inverted V's
- Built in dummy load
- Built in 4:1 balun for balanced wire feeders
- Bypass position for quick straight through antenna connection but still with SWR/POWER monitoring
- 8 position antenna selector switching
- Average power reading to 200 watts
- Standing Wave Radio measurements with easy SET function

### SPECIFICATIONS

- Frequency .....1.8-30MHz
- Power Rating .....200W single tone
- Antenna Matching .....2 air variables  
(1.5kv)  
Rotary 48 turn Inductor with 18 ga. wire
- Meter .....Single analog, 9-12dc for lamp
- Balun .....Ruthroff 4:1 balun included
- Dimensions .....3.25"H x 7"W x 7.5"D
- Weight .....3 lbs.
- Approvals .....CE approved

**\$129<sup>95</sup> • CN model - \$139<sup>95</sup>**



### PALSTAR INC.

9676 N Looney Rd.  
PO Box 1136-1482  
Piqua, OH 45356

Great Amateur accessory products designed and manufactured in Ohio by Paul Hrivnak, former founder-owner of "VECTRONICS". With superior materials and attention to detail, these products are built to last and give you the most value for your money.

Telephone: 1-937-773-6255

Fax: 1-937-773-8003

E-mail: Palstar@erinet.com

\*Palstar Inc. is not directly or indirectly associated with "VECTRONICS"



# A99

## 10 meter Base Antenna by SOLARCON

### TWIN RING ADJUST-A-MATCH TUNING

The **A-99** is a Half wave  
over a Quarter wave,  
variable mutual inductance  
tuned antenna for 10 meters.

It's **economical** and **easy to use!** — it features the **SOLARCON** Twin tuning, which makes it possible to tune the input to the antenna and obtain the optimum SWR over a wide range of frequencies. The optional **GPK-1** Ground Plane Radial Kit makes it perform even better!

**Simple Tuning!** — raising the tuning rings raises the frequency and lowering the rings lowers the resonant frequency.

**A real beauty!** — rugged three-piece white fiberglass construction with triple plated brass fittings. It's easy to assemble and install.

#### Specifications:

Height .....	17 ft. 8 in.	Radiation Angle .....	<20°
Sections .....	3	Grounding .....	DC Ground
Band .....	10 meters	Mounting .....	1-1/2" mast
Gain .....	3 dBi	Coaxial Cable .....	5252
Power Limit .....	2000W	Connector .....	SO-239

**A-99 Antenna**  
**\$64<sup>95</sup>**

**GPK-1  
Radial Kit**  
**\$39<sup>95</sup>**



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#### MFJ

**422C Keyer-Paddle Combo**  
This Keyer unit installs on top of a Bencher Iambic Paddle. If you already have a

Bencher paddle, buy just the keyer unit. Uses famous Curtis™ keyer chip. Speed is 9-50 wpm, it has adjustable weight and tone, dot-dash memories, sidetone. Semi-automatic & tune or automatic modes. Keys grid block, cathode or solid state. Uses 9V battery or AC adapter. 4 1/8" x 2 5/8" x 5 1/2" d... **\$124<sup>95</sup>**

**422CX** Keyer only ..... **\$79<sup>95</sup>**

#### 407C Deluxe Electronic Keyer

Features dot-dash memories, self completing dots and dashes; jam-proof spacing. RF proof, instant start. Single squeeze, or straight key. Front panel controls: speed, weight, tone and volume, ON/OFF, tune, auto/semi-automatic. Selectable A or B-type iambic keying. Built-in speaker, uses 9V battery, or MFJ-1305 AC adapter. 7" x 2" x 6" d ..... **\$69<sup>95</sup>**

**401C Econo Electronic Keyer II** Similar to MFJ-407C but with external speed and volume controls, internal weight and tune controls. Uses 9V battery or MFJ AC adapter..... **\$49<sup>95</sup>**

#### 492

##### Menu Driven Memory Keyer

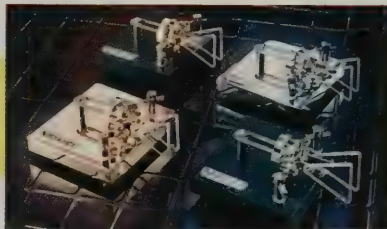
No keypad, no complex sequences to remember. Just follow the menu! Save and play messages; decrement serial #s; set speed, weight, sidetone; enter iambic, semi-auto, handkey, message queue, paddle command modes; turn on/off sidetone, transmitter tune, keying output on/off; select iambic A or B, reverse paddle, Morse trainer, and store starting serial number. Holds 192 characters in 4 soft sectored message memories, expandable to over 8K characters in 8 memories with lithium battery back-up. Front panel controls for speed (5-100 WPM) and volume, built-in sidetone speaker. Direct and grid block keying output. Uses 9V battery or opt.110V AC adapter. 6 1/2" x 2 1/2" x 6 1/4" ..... **\$89<sup>95</sup>**

**493** All features of the MFJ-492, but with 32K memory. IBM keyboard input, serial port for computer interface and QSO simulator..... **\$129<sup>95</sup>**

**451 Morse Keyboard** A stand-alone CW keyboard with 200 character type-ahead buffer, and two 100 character messages. Requires 12VDC or MFJ-1312B 110VAC adapter ..... **\$89<sup>95</sup>**

**452 Morse Keyboard** with 16 character LCD display. Comes with keyboard ..... **\$119<sup>95</sup>**

## BENCHER, INC.



**"RJ" HAND MORSE KEYS:** A superb and responsive instrument which will bring new pleasure to traditional Morse keying. Features include oil impregnated sintered bearings at pivot points to impart friction-free pivoting and wobble-free vertical tracking. Stainless steel locking screw allows individual adjustment for arm height, tension and contact spacing. Black "Navy" style knob with removable skirt gives a solid feel with outstanding tactile feedback. Heavy metal base available in black texture or chrome finish with anti-skid rubber feet

**RJ-1** Black base **\$81<sup>95</sup>** • **RJ-2** Chrome base **\$94<sup>95</sup>**



## VIBROPLEX®

The Original "Bug" — first patented in 1904, the Original is still manufactured today using tools and dies similar to those used by its inventor, Horace G. Martin. Designed for code speeds of 20 wpm on low side to 50+ wpm on high side. **Standard model** has painted base and chrome top parts. **Deluxe model** has polished chrome base and top parts with fine jewel movements for smooth operation. **Presentation model** has polished chrome base with 24K gold-plated base plate and chrome top parts. Gold model has gold-plated base with chrome top parts.

**Standard** (#110) **\$159<sup>95</sup>** • **Deluxe** (#105) **\$199<sup>95</sup>**  
**Presentation** (#100) **\$269<sup>95</sup>** • **Gold** (#090) **\$299<sup>95</sup>**

**Vibrokeyers** Single lever paddle (top) initiates the automatic dots and dashes of an electronic keyer. **Iambic paddle** allows automatic dot & dash insertion. **Standard:** black base, chrome parts; **Deluxe:** chrome base and top parts with jeweled movements; **Presentation:** (iambic only) 24K gold-plated base and top parts with jeweled movements; **Gold:** 24K gold-plated base and top parts with jeweled movements.

**Vibrokeyer: Standard** (#120) **\$139<sup>95</sup>**

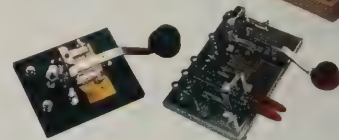
**Deluxe** (#115) **\$179<sup>95</sup>** • **Gold** (#113) **\$269<sup>95</sup>**

**Iambic: Standard** (#135) **\$139<sup>95</sup>**

**Deluxe** (#130) **\$179<sup>95</sup>** • **Presentation** (#125) **\$239<sup>95</sup>**  
**Gold** (#123) **\$269<sup>95</sup>**

**Brass Racer Iambic** A solid brass Iambic paddle mounted on a polished hardwood base. (#145) **\$99<sup>95</sup>**

**Square Brass Racer** Solid lacquered brass Iambic paddle on a polished hardwood base. Magnetic action, no springs.... (#150) **\$139<sup>95</sup>**



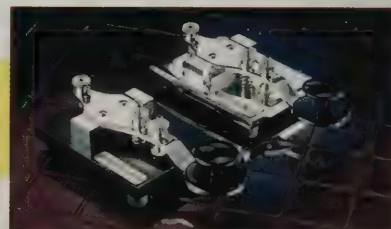
**Straight Keys:** Unique mechanical action, unlike any straight key ever manufactured.

**Standard** (#155) **\$139<sup>95</sup>** • **Deluxe** (#160) **\$179<sup>95</sup>**  
**Gold** (#153) **\$269<sup>95</sup>**

**Double Keys:** Choice of Iambic & Straight Key or Vibrokeyer & Straight Key. Double keys allow you to instantly switch from using an electronic keyer to the personal touch of a Straight Key

**Straight key/Iambic** (#165) **\$319<sup>95</sup>**

**Straight key/Vibrokeyer** (#170) **\$319<sup>95</sup>**



**IAMBIIC & SINGLE LEVEL PADDLES:** The highest quality, offering precise control, reliability and years of trouble-free operations. Wide-range adjustment of tension and contact point spacing. Self adjusting needle bearings, gold-plated solid silver contact points, and polished acrylic plastic paddles. The Main frame, contact post, spring posts and bearing ring are all precision machined from solid brass, then chrome or gold plated for durability and rich appearance. Heavy steel base with non-skid feet.

**BY-1** Black base **\$79<sup>95</sup>** • **BY-2** Chrome **\$94<sup>95</sup>**  
**BY-3** Gold **\$249<sup>95</sup>** • **BY-4** Black, Gold comp. **\$149<sup>95</sup>**



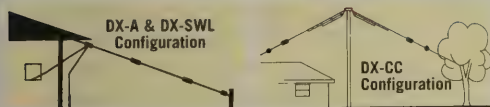


## Solving your Antenna and Lightning Problems!

### Limited Space High Performance Antennas

Unlike the usual trap antenna, there are no capacitors to break down under high RF voltages. "ISO-RES" inductors & 12 ga. insulated solid copper wire tolerate full-legal power. 50Ω direct coax feed; a tuner usually not required when operating in the resonant bands, but may be used for multi-band work.

- NO-TRAP DESIGN
- STAINLESS STEEL HARDWARE
- FULLY ASSEMBLED
- SEVERE WEATHER RATED
- NO-TRAP DESIGN



**DX-A** 160-80-40 Meter 1/4-wave Twin Sloper • A top low frequency DX antenna. Combines the tremendous DX firepower of the 1/4-wave sloper with the wide bandwidth of the 1/2-wave dipole. One leg is 67 ft., the other 55 ft. Installs like an Inverted-V with ground return accomplished thru tower or down-lead... **\$59<sup>95</sup>**

**DX-B** 1/4-wave DX sloper • Single wire with high performance on 160, 80, 40 & 30 meters. Designed for limited space installations where room doesn't allow for the DX-A twin sloper. Requires only 60 ft. overall and provides amazing DX performance at installation heights of only 35 ft., and with the low end at only 8 ft. Pre-assembled & Pre-tuned. - just put it up and start enjoying low band operation. Utilizes stainless-steel hardware, 12 gauge solid copper wire and efficient Alpha Delta "Iso-Res" RF choke coils. To gain the same broadbanded performance like the DX-A, the DX-B is also designed to be used with a wide range antenna tuner, so no trimming or tweaking is necessary. 50Ω coax feed, rated for full legal power... **\$69<sup>95</sup>**

**DX-SWL** SWL Broadcast Sloper • Covers the 13, 16, 18, 19, 21, 25, 31, 41, 49, 60, 90, and 120M short-wave bands plus the AM broadcast band. Sloper design provides outstanding reception of low-angle DX signals. Multi-band 2KW transmit capability with an appropriate antenna tuner. Overall length is 60 ft... **\$79<sup>95</sup>**



**DX-CC** "No-Trap" 80-40-20-15-10 meter dipole or inverted-V. Overall length is 82 ft... **\$119<sup>95</sup>**

**DX-DD** "No-Trap" 80 and 40 meter dipole or inverted-V. Overall length is 82 ft... **\$89<sup>95</sup>**

**DX-EE** "No-Trap" 40-20-15-10 meter dipole or inverted V. Also covers 30-17 & 12 meters with an antenna tuner. Overall length is 40 ft... **\$99<sup>95</sup>**

#### DX-Series

##### Monoband Dipoles

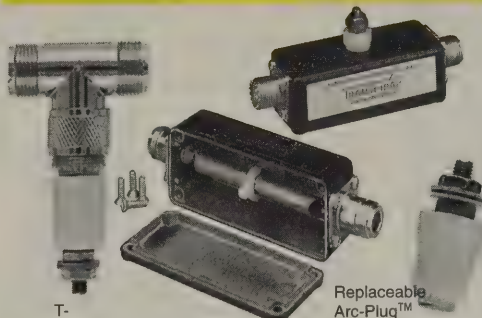
Full-size dipoles utilizing the Delta-C Center Insulator with built-in Arc-Plug® Surge Suppressor. Fully assembled using 12 ga. insulated high-strength solid copper wire, CIN end insulators & 50 ft. nylon support rope. Feed with coaxial cable or open-line, rated for legal power.

**DX-80** For 3.5MHz (75-80M band), 133 ft. long. **\$49<sup>95</sup>**

**DX-40** For 7 MHz (40M band), 66 ft. long. **\$39<sup>95</sup>**

**DX-20** For 14 MHz (20M band), 33ft. long. **\$39<sup>95</sup>**

### Transi-Trap® Surge Protectors



Alpha Delta Transi-Trap Surge Protectors are gas surge arresters which will protect your valuable ham equipment much more effectively than the lower cost air-gap types.

The heart of the unit is the Arc-Plug™, which consists of two electrodes hermetically sealed in a gas filled ceramic cylinder. It acts like a voltage dependent switch that can repeatedly carry large currents for brief periods of time. When a voltage surge occurs on your transmission line, an arc forms between the electrodes allowing it to conduct harmlessly to an independent ground connection, reducing feedline voltage to less than 30 volts. That's protection!

Transi-Traps are the choice of the U.S. Military, and government agencies, worldwide. Transi-Traps are designed for 50Ω coaxial cable and are available with standard SO-239 connectors or N-type connectors which extend operation through 1 GHz.

**Model RT** Rated at 200W thru 500 MHz... **\$36<sup>95</sup>**

**Model RT/N** Rated at 200W thru 1GHz... **43<sup>95</sup>**

**Model HV** Rated at 2KW thru 500 MHz... **39<sup>95</sup>**

**Model HV/N** Rated at 2KW thru 1GHz... **46<sup>95</sup>**

**Model LT** "T"-type, 200W thru 30 MHz... **29<sup>95</sup>**



**DX-LB** Low Band Dipole • Covers 160-80-40 meters with an overall length of only 100 ft. Antenna performance and 2:1 VSWR bandwidth is site dependent and varies with height above ground and surrounding objects. The typical bandwidth is:

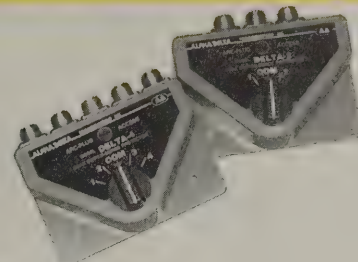
160M - 20kHz • 80M - 40 kHz • 40M - 300 kHz

Full band coverage can be accomplished with an antenna tuner. Built with insulated 12ga. wire, stainless steel hardware and uses the Model DELTA-C static protected center insulator and CIN end insulators. Use coax or open wire line and configure as a dipole or inverted-V. Assembled and ready to go!... **\$119<sup>95</sup>**



**DX-ULTRA** Shortwave Dipole Antenna • Covers AM Broadcast through 30MHz. Provides efficient, low-noise, broadband performance for Medium Wave, Tropical, International SW, Military, Government, Embassy, Maritime, Aircraft, Commercial and Utility frequencies. ISO-RES inductors, parallel wire elements and the exclusive DELTA-C Center Insulator with the built-in ARC-PLUG® Static Electricity Protector. Over all length is 80 ft.; may be installed as a dipole, inverted-vee, or full sloper. It can be used with an antenna tuner as a transmit antenna up to 2kW. Connectors will accept either coaxial cable or balanced line. Comes fully assembled, ready to go!... **\$119<sup>95</sup>**

### Lightning Surge Protected 2 & 4 Position Coax Switches



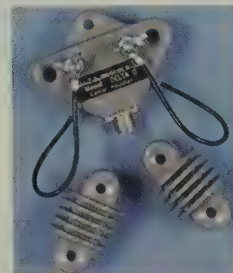
Alpha Delta Coaxial Antenna Switches are made only in the U.S.A. The extremely high quality custom design features a cast housing with a constant impedance micro-strip cavity for outstanding performance through UHF. No lossy wafer switches are used, and a solid positive detent roller bearing switch drive leaves no-doubt to which position is selected. The unused antenna circuits are automatically grounded to reduce antenna interaction, noise and the effects of lightning. For the antenna circuit that is in use, the famous replaceable Alpha Delta Arc-Plug™ Cartridge provides continuous protection. Antenna switched in or out, you're well protected both ways! The Arc Plug is easily accessed through front panel so you may permanently mount the switch to any surface. Both the two and four position models handle full legal power.

**DELTA-2** 2-position coaxial switch with SO-239 connectors, rated for up to 500MHz. **\$49<sup>95</sup>**

**DELTA-2/N** 2-position coaxial switch with N-type connectors, rated for up to 1.3 GHz **\$64<sup>95</sup>**

**DELTA-4** 4-position coaxial switch with SO-239 connectors, rated for up to 500MHz. **\$79<sup>95</sup>**

**DELTA-4/N** 4-position coaxial switch with N-type connectors, rated for up to 1.3 GHz **\$89<sup>95</sup>**



### Antenna Hardware Kit

Don't assemble your next dipole antenna without one of these CENTER and END insulator combos. They're designed for strength, and to provide equipment protection with a built-in replaceable SEP Arc-Plug® Static Electricity

Protector. Ideal for dipoles, Vees, zepps and all kinds of SWL receive antennas. Feeds with either coax or balanced line. Rated for full legal power.

The SEP Arc-Plug protector which is mounted in the DELTA-C center insulator "bleeds off" slow rising static electricity charges routing them harmlessly to ground, before they can enter the shack thru the feedline. This is far more effective than DC grounded baluns or chokes, which can be "popped" by static charges. Dangerous static charges are developed from thunderstorms, high wind driven snow or desert sand, and have been measured to 1,000's of volts; so potent, they can puncture the dielectric of unterminated coax.

The DELTA-C center insulator and DELTA-CIN end-insulators are fabricated with an extremely rugged UV and RF resistant DELTALLOY material that is so tough, you can drop it off a roof without damage. Don't rely on fragile ceramic or glass insulators! Only stainless steel hardware used in the center insulator for salt air and other corrosive environments, and all internal connections are hard soldered.

**DELTA-C** Antenna hardware kit • Contains Center insulator, (2) end-insulators & SEP ARC-PLUG Protector... **\$29<sup>95</sup>**

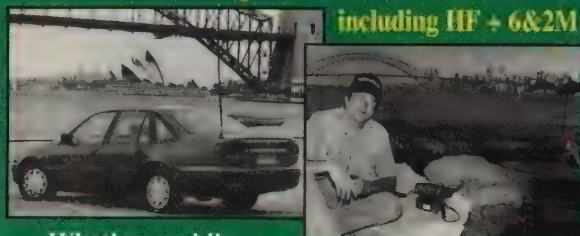
**DELTA-CIN** End-insulators (separate) ea. **\$1<sup>95</sup>**



# OUTbacker

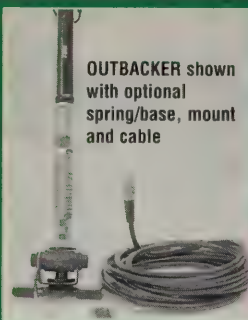
HF Mobile Antennas

Performance *plus* Convenience...



Whether mobile... or backpack portable!

including HF + 6&2M



OUTBACKER shown with optional spring/base, mount and cable

• HAM - MARS - CAP - MARINE/ITU • LOW SWR  
• WIDE BANDWIDTH • NO CHANGING COILS  
**It's plug-n-play!**



**The OUTBACKER** - Constructed of fiberglass with pretuned copper helical windings and covered with smooth epoxy-resin and a coating of polyurethane for strength, and durability. The mounting ferrule is nickel-plated brass with standard 3/8x24 threads.

Frequency coverage is broadbanded but the top spike is adjustable which allows tuning for the lowest possible VSWR on 75M and the upper end of 10M.

Tap points are clearly engraved for each band. Changing bands is accomplished manually by plugging the unique OUTBACKER "Wander lead" into the proper tap; for 75M the lead is removed entirely.

Beautiful, shiny black finish. 8 models, with optional spring/base, mounts and cable.

Description	AES Model #	Price
OUTBACKER PERTH ..... 75-10M + WARC's, 150W P.E.P. • 7.5 ft. tall • 3.5 ft. stinger retracts into 4 ft. mast for garaging.....	Perth	\$289.95
OUTBACKER PERTH PLUS..... 75-10M <i>plus</i> 6 & 2M • 6 ft. tall • Perfect for HF+VHF radios: IC-706, DJ-70T, etc.....	Perth Plus	\$299.95
OUTBACKER 8 ..... 75-10M, 300W P.E.P. • 6 ft. tall	OB-8	\$279.95
OUTBACKER HP ..... 75-10M • High-power - 500W P.E.P. • 6 ft. tall.....	OB-8HP	\$299.95
OUTBACKER SPLIT ..... 75-10M, 300 W P.E.P. • 6 ft. tall • Breaks down into 2-3 ft. sections for easy transport, pouch included. ....	OB-S8	\$299.95
OUTBACKER TRI-SPLIT ..... Same as OUTBACKER SPLIT except breaks down into 3-2 ft. sections, storage pouch included .....	OB-8TRI	\$329.95
OUTBACKER MARINER ..... Covers ITU Marine: 2.182, 4.1, 6.2, 8.2, 12.4, 16.5, & 22.1MHz and Ham bands: 75, 40, 20, 17 & 10M .....	OB-M	\$429.95
OUTBACKER STEALTH PLUS..... 75-10M <i>plus</i> 6 & 2M • <u>Only</u> 4 ft tall, 150WP.E.P. • Perfect for use with HF+VHF radios: IC-706, DX-70T, etc. ....	Stealth-PLUS	\$269.95
OUTBACKER Spring/Base..... HEAVY DUTY • Nickel/zinc plated • 3/8-24 threads • SO-239 connector • Requires 1/2" hole for mounting ...	OB-SB	\$99.95
OUTBACKER OB-360..... Trunk lip mount with spring for Perth/STPlus/Perth Plus	OB-360	\$99.95
DIAMOND K-4003/8C..... Diamond 3/8x24 thread trunk-lip mount with 6 ft. coaxial cable for all OUTBACKER models	DIAK400-3/C	\$69.95
DIAMOND C-110 ..... Diamond 10 ft. extension cable for K-400/3/8C trunk-lip mount.....	DIAC-110	\$14.95



## The Alpha Delta Outpost™ Tripod/Ground Coupler Ground Mount System

- Designed to match the base impedance of all OUTBACKER® antennas.
- Fold-over 3/8" x 24 - SO-239 top mount so the antenna will be out of view when not in use.
- Constructed of aircraft 6061-T6 aluminum, stainless steel hardware and wing nuts - No tools required!
- No digging - no holes in ground - no concrete required.
- The fold-out legs act as a large capacitor providing proper coupling to the ground and proper base impedance to the antenna.
- Fold-up design for 10 minute installation.
- Weight - 18 lbs.

**OUTBACKER® OUTREACH™ Antenna ..... \$399.95**

**Alpha Delta OUTPOST™ Tripod ..... \$199.95**



# Defining a **NEW** era of Efficient, Portable Antenna Systems

## Imagine This!

An *efficient* Portable antenna system – nearly unseen by your neighbors and covering ALL the bands from 160 thru 10 meters, providing an exceptional level of performance that will change forever the way you think about compact antennas.

## How Can This Be?

Alpha Delta & OUTBACKER® have teamed up to design a complete system to meet the needs of those requiring space limited, deed restricted, backyard, patio, woods or field day installations.

### The Outbacker® Outreach™ Antenna

- All Bands – 160 thru 10 meters –
- Only 12 feet tall!
- Exceptional performance – 10, 12, and 15 meters are 5/8 wave – all bands are center loaded for peak performance. Compare to any whip you have ever used – you'll be amazed!
- Handles 150 watts P.E.P.
- Split 8 ft. shaft and 4 ft. stinger – antenna breaks down to a 4 foot length for easy portability.
- Terminates in standard 3/8 x 24 base.
- Utilizes the time proven OUTBACKER® band tap system.
- Weight – 4 lbs.

**\$399<sup>95</sup>**

**New!**

**Outbacker®**

**OUTREACH™ 500**

Rated 600W SSB & 500W CW  
160 thru 6 meters

**\$439<sup>95</sup>**



Jim Burns, WB4ILP demonstrates the versatility of the ALPHA DELTA OUTPOST™

**ALPHA DELTA COMMUNICATIONS, INC.**



#### Variable Response Console

An advanced audio processing speaker system that offers studio level audio quality for music, voice, and CW/data for the communications enthusiast. It enhances the reception capabilities of ANY receiver, transceiver or scanner—even the expensive ones using DSP! An exclusive custom designed ducted port bass reflex speaker system offers outstanding audio performance.

- Low distortion, low harmonic push-pull audio amplifier. Outperforms the typical single-ended amplifier types.
- Adjustable 12dB Bass boost and cut circuitry enhances both Voice and Music. LED reads out in dB
- Adjustable sharp cut-off "Sampled Data Switched Capacitor Audio Filter" (SCAF) can be set for optimum interference reduction for any mode and any band condition – AM, FM, SSB, CW or data. LED light bar readout shows cut-off frequency and is calibrated in kHz.
- Peaking circuitry (20 dB) allows CW and Data signals to "pop" out of the background noise and interference.
- Continuously adjustable 40dB Deep Notch circuitry effectively takes out interfering heterodynes.

**Model VRC** Variable Response Console .....**\$249<sup>95</sup>**

**Model VRC-2** Ducted Port Bass Reflex Speaker  
same as above, but no amplifier/filter .....**\$99<sup>95</sup>**





**New!**  
from  
**YAESU**

Available early 1998

### FT-846 HF/50/144/430 MHz All Mode Transceiver

- Ideal for HF and Satellite Operation
- HF/50 MHz: 100W-144/430 MHz: 50W
- Crossband Full Duplex Operation
- Normal/Reverse Tracking
- Dedicated Satellite Memories
- DSP Filters (Notch, NR, BPF)
- Low Noise VHF/UHF Preamps Built-in
- High Resolution 0.1 Hz Tuning Steps for Ultra Smooth Tuning
- Shuttle Jog Tuning Dial
- CW Sidetone and Pitch Control
- CTCSS/DCS Encode/Decode Built-in
- Direct Frequency Keypad Entry
- 1200/9600 bps Packet Ready

This device has not been approved by the Federal Communications Commission. This device is not, and may not be offered for sale or lease until the approval of the FCC has been obtained.

**New!**  
from



### DX-77T HF Base Station

- 100W SSB, CW, FM & (40W) AM.
- 160-10 meter Transmit • 500kHz to 30MHz General Coverage Receive • IF shift • RIT • CW filter • CW keyer • Speech processor • AGC controls • RF attenuation & gain • CTCSS encoder • Computer control • Cloning • 12 VDC

**MORE! • \$949<sup>95</sup>**

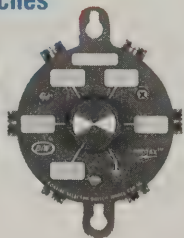
### B+W Coaxial Switches



- 52/75Ω • 2KW SSB • Low insertion loss • VSWR less than 1.2:1 up to 150 MHz • up to -60dB isolation @ 30MHz

**CSR-5G** (right) 5-position, side SO-239 connectors, wall mount. Grounding position ..... **\$51<sup>95</sup>**

**CS-6G** 6-position, for on desk or wall mount. SO-239 connectors, grounding position ..... **\$51<sup>95</sup>**



### Low Pass Filter



**FL-10/1500** Helps prevent TVI! Low VSWR. 52Ω input and output impedance. Rated for 1500W. Sharp cutoff, high attenuation of undesired harmonics with less than 0.3 db insertion loss .. **\$75<sup>95</sup>**



### DM-340MVT Power Supply



Input: 120V AC 50/60Hz  
Output: 13.8V DC (0-15V adjust.)  
Rated: 30A Cont./35A Max.  
Voltage Regulation: Under 2%  
Ripple Voltage: Under 30mVp-p  
Protection: Automatic Shutdown over 35A

- Volt & Amp Meters • Cooling Fan
- Binding Posts • Quick-connects
- Cigar lighter socket **\$179<sup>95</sup>**
- 9" w x 6" h 9" d, 19 lbs.

**artsci Inc. Q-VIEW QSL Card Holders** • Proudly display your favorite your QSL cards in these 12" w x 40" clear plastic hang-up holders. Each holds (20) 3 1/2" x 5 1/2" cards. Pockets open at center to receive cards easily.

Package of 3 ( frames & displays 60 cards) • **\$12<sup>95</sup>**



### WA1FFL Ladder Loc® CENTER INSULATOR & SUPPORT

Provides a means of attaching 450Ω ladderline to dipole antennas. Minimizes feedline flexing at the antenna feedpoint and ensures a long lasting, trouble-free installation. Provides a convenient attachment point for a support rope. UV stabilized for long life. .... **\$12<sup>95</sup>**

### INTERNATIONAL ANTENNAS Double Bazooka Antennas



Double Bazooka 1/2-wave antennas are constructed with a flat-top of 50Ω coax and a section of open-wire line at each end. The shield is split in the middle, but the center conductor and insulation are left intact. The feedline connects to the split shield which becomes the radiating element. This results in extremely quiet, broadband operation with 98% efficiency and a 50Ω feedpoint that feeds directly without a balun. Mounts horizontally or as an inverted V with low SWR across the entire band. Handles the legal RF power limit. Weatherproof center insulator with coax connector. The 80 meter version will operate efficiently on all bands with the addition of an antenna tuner.

**IAC-80M** Bazooka, 3.5 MHz (75-80M), 121 ft. **\$135<sup>95</sup>**

**IAC-40M** Bazooka, 7 MHz (40M), 64 ft. long. .... **\$115<sup>95</sup>**

### Van Gorden Engineering

#### Hi-Q Balun



- 1:1 or 4:1 impedance ratio: For matching 52Ω unbalanced coaxial cable to 52Ω balanced antennas.
- For dipoles, yagis, inverted vees and doublets.
- Covers 3 to 40MHz, 1.5kW
- Replaces center insulator
- Reduces feedline radiation for more power into antenna, and less TVI and BCI problems.
- Built-in DC ground reduces noise and protects against lightning.
- Weatherproof. SO-239 connector and center support eye hook.

**\$14<sup>95</sup>**

#### Hi-Q Antenna Center Insulator

- Insulator only, no internal balun
- Replaces egg-type center insulator
- Small, rugged, lightweight, weatherproof. SO-239 connector, center supporting eye hook.



**\$6<sup>95</sup>**

**Antenna End** End insulators ..... each **\$4<sup>95</sup>**  
**Dog Bone** Antenna insulators ..... each **95¢**



**Dipole Antennas** Complete with Hi-Q 1:1 balun, #14 stranded copper antenna wire, plastic insulators, and 100 ft. of nylon rope. Rated for full legal power. May be used in an inverted V configuration.

**D-80** 80/75m, 130 ft.

**D-15** 15m, 22 ft long

**D-40** 40/15m, 66 ft long

**D-10** 10m, 16 ft long

**D-20** 20m, 33 ft. long

See the Price List

**Shortened Dipoles** Construction is the same, and includes traps as shown above.

See the Price List

**SD-80** 75/80m, 90 ft. • **SD-40** 40m, 45 ft.



**All-Bander Dipole Antenna** Covers 160-10M using an antenna tuner with balanced output. Full 135 ft. long (or less, as an inverted V or sloper). Trim to fit small lots. Assembled, with #14 gauge copper wire, center and end insulators and 100 ft. of 450Ω balanced line. 2KW PEP. .... **\$29<sup>95</sup>**

**SHORTY All-Bander** As above, but with loading coils to shorten the length to 70 ft. overall. **\$44<sup>95</sup>**

#### G5RV Multiband Antenna

Covers 3.5-30MHz, +1.8 MHz as a Marconi-type antenna with a tuner.

Consists of a 102 ft. flat top with a 31 ft. long section of 300Ω KW twinlead, a transformer/coupler & 70 ft. of RG-8X coax & connector. 2KW PEP, assembled ..... **\$50<sup>95</sup>**

**G5RV Jr** 10-30MHz 17 ft. twinlead ..... **\$24<sup>95</sup>**

**G5RV-E** 3.5-30MHz, 102 ft., 31 ft. twinlead **\$28<sup>95</sup>**

**G5RV-M** 1.8-30MHz, 204ft., 65 ft. twinlead **\$50<sup>95</sup>**



#### VanGorden Ladder Line

100 ft., 18 ga. 450 Ω insulated ladder line ... **\$12<sup>95</sup>**

100 ft., 14 ga. 450 Ω insulated ladder line ... **\$24<sup>95</sup>**

1000 ft 18 ga. 450 Ω insulated ladder line .. **\$99<sup>95</sup>**

1000 ft 14a. 450 Ω insulated ladder line .. **\$199<sup>95</sup>**

#### VanGorden White Nylon Rope

**NR-100** 100 ft. roll, antenna guy rope ..... **\$4<sup>95</sup>**

**NR-1000** 1000 ft roll, antenna guy rope ..... **\$44<sup>95</sup>**

#### Special "N" Connector

Male connector for Belden 9913 & 8214 coax **\$4<sup>95</sup>**

#### VanGorden Ready-Made Coax Assemblies

6-100 ft. lengths of RG-8X or RG-213 with Silver-Plated-Teflon PL-259 connectors ..... See Price List



**Belden****Coaxial Cable — See Price List under Belden**

Belden number	RG-type	Dia. (in.)	Center conductor	Insulation type	Shield coverage	Jacket type	Imp. (Ω)	Vel. factor	Loss/100' 100 MHz
<b>9201</b>	58/U	.193	#20 solid copper	Solid polyethylene	78% bare copper	PVC	53	66%	4.5 dB
<b>8240</b>	58/U	.193	#20 solid tinned cop.	Solid polyethylene	95% tinned copper	PVC	53.5	66%	3.8 dB
<b>8259</b>	58A/U	.193	#20 stranded tinned cop.	Solid polyethylene	96% tinned copper	PVC	50	66%	4.9 dB
<b>8219</b>	58C/U	.193	#20 stranded tinned cop.	Cellular polyethylene	96% tinned copper	PVC	50	78%	4.5 dB
<b>8262</b>	58/CU	.193	#20 stranded tinned cop.	Solid polyethylene	95% tinned copper	Non-contam. PVC	50	66%	4.9 dB
<b>9258</b>	8/X	.242	#16 stranded copper	Cellular polyethylene	95% bare copper	PVC	50	78%	3.7 dB
<b>8237</b>	8/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	PVC	52	66%	1.9 dB
<b>8214</b>	8/U	.405	#11 stranded copper	Cellular polyethylene	97% bare copper	PVC	50	78%	1.8 dB
<b>9913</b>	8/U	.405	#10 solid copper	Semi-solid polyethylene	100% foil + 88% braid	PVC	50	84%	1.3 dB
<b>9913F</b>	8/U	.405	#10 stranded copper	Cellular polyethylene	100% foil + 90% braid	PVC	50	83%	1.3 dB
<b>9251</b>	8A/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	52	66%	2.2 dB
<b>8267</b>	213/U	.405	#13 stranded copper	Solid polyethylene	97% bare copper	Non-contam. PVC	50	66%	2.1 dB
<b>8241</b>	59/U	.240	#22 solid copper	Solid polyethylene	95% bare copper	PVC	73	66%	3.4 dB
<b>8238</b>	11/U	.405	#18 stranded tinned cop.	Solid polyethylene	97% bare copper	PVC	75	66%	2.0 dB
<b>8213</b>	11/U	.405	#14 solid copper	Cellular polyethylene	95% bare copper	PVC	75	78%	1.5 dB

**Belden****New 9913F High-Flex RF Transmission Cable**

This low-loss RG-8/U-type coaxial cable is a high-flex version of Belden's popular 9913. It offers a stranded center conductor for improved flexibility and flex life, a patented high-flex cut and abrasion resistant jacket and a high velocity foam insulation.

- **Center Conductor:** 10 AWG (19x23) .108 bare copper
- **Insulation type:** Foam polyethylene
- **Shield:** Duobond II + 90% tinned copper braid; 100% shield
- **Nominal Impedance:** 50Ω • **Velocity Factor:** 83%
- **Diameter:** .405 inch • **Nominal Capacitance:** 24.5 pF/ft.
- **Loss per 100 ft:** 1.3 dB @100MHz, 2.8dB @400MHz

Per ft. **87¢** • 100 ft. roll **\$79<sup>95</sup>** • 250 ft. roll **\$159<sup>95</sup>**  
500 ft. roll **\$299<sup>95</sup>**

**Rotor Cable**

**8448** Standard duty, 8 wire. Consists of 6-#22 and 2-#18 tinned copper conductors. PVC insulation and PVC jacket. For run up to 100 ft.

**9405** Heavy duty, 8 wire. Consists of 6-#18 and 2-#16 tinned copper conductors. PVC insulation and PVC jacket. For runs over 100 ft.

**8484** Standard duty, 4 wire. Consists of 4-#20 tinned copper conductors. PVC insulation & jacket.

Available by the foot or 100, 500 & 1000 ft. rolls

See BELDEN in the Price List

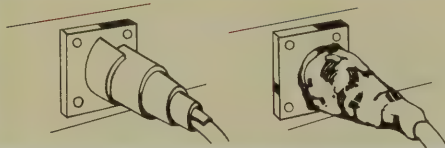
**Antenna & Ground Wire**

**8000** Standard duty, 8 wire. Consists of 6-#22 and 2-#18 tinned copper conductors. PVC insulation & acket. per ft. **21¢** • 100 ft. **\$17<sup>95</sup>** • 1000 ft. **\$159<sup>95</sup>**

**8018** #8 AWG solid, soft annealed aluminum  
Multiples of 50 ft - **\$12<sup>95</sup>** each • 500 ft. roll **\$99<sup>95</sup>**

**synthetic textiles, Inc.****BLACK DACRON®  
POLYESTER ANTENNA ROPE**

- UV-PROTECTED • HIGH ABRASION RESISTANCE
- REQUIRES NO EXPENSIVE POTTING HEADS
- EZ TO CUT • 100 ft.  $\frac{3}{8}$ " **\$6<sup>95</sup>** - 350 ft.  $\frac{3}{8}$ " **\$39<sup>95</sup>**

**COAX-SEAL®****Hand Moldable Plastic for Antenna Component Protection**

Coax Seal quickly and effectively seals all types of coaxial fittings; baluns; antenna parts and connectors of all shapes - adheres tightly to vinyl and polyvinyl coax outer jackets. Simply wrap it on like regular tape, then mold it to any shape. It stays flexible and sealed at any temperature for years to resist moisture penetration and deterioration. Its permanent flexibility makes it possible to remove and re-install fittings, then re-seal by re-forming the same material. Non-toxic, non-contaminating. Roll, 1/2" wide x 60" .....UNV104 **\$2<sup>95</sup>**

**STUF Dielectric Waterproofing Filler for Coaxial Connectors**

- High purity macroscopic foam, dielectrically simulates the coaxial cable core
- Just fill connector and tighten. Filler hydraulically channels into all connector voids and ports of moisture infiltration.
- Non-hardening, easy removal.
- Contains no silicones, or other additives to harm coaxial cable material.

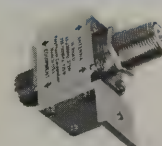
CRS STUF  
\$4<sup>95</sup>  
per tube**penetrox® A Electrical Joint Compound**

A special anti-seizing compound for all bare aluminum to aluminum and aluminum to copper connections, and also as a thread lubricant. Apply to mating pieces of antenna components, tubing, etc. before assembly to provide a non-corrosive, low resistance, airtight seal. Makes disassembly of tubing and bolts at later date a breeze. 4 oz ..... **\$12<sup>95</sup>**

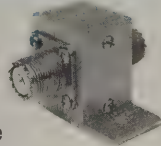
**For Coaxial Connectors and Adaptors**  
**go to Page 8 in the Price List**

**PolyPhaser® Lightning Protection**

PolyPhaser's Impulse Suppressors feature a hermetically sealed voltage sensitive gas tube. Additional components and unique design provide No DC Continuity with low loss to assure that surge voltages and currents that form differentially on the coaxial cable are prevented from being shared by your valuable equipment. 10 year Warranty.

**BROADBAND COAXIAL PROTECTORS**

- Multi-strike capability with low strike throughput energy • Aluminum enclosure.
- VSWR: ≤1.1 over its frequency range

**FLANGE MOUNT (right)**

**IS-50UX-C0** Frequency Range: 1.5MHz to 400MHz. Max. Power: HF 2kW, VHF 375W, UHF 125W **\$56<sup>95</sup>**

**IS-50UX-C1** Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W .....**\$56<sup>95</sup>**

**IS-50NX-C2** Range: 125MHz to 1000MHz. Max. Power: VHF 375W, UHF (low) 125W, 800MHz to 1 GHz 50W. Type N connectors.....**\$56<sup>95</sup>**

**BULKHEAD MOUNT (left)**

**IS-B50LU-C0** Frequency Range: 1.5MHz-400MHz. Max. Power: HF 2kW, VHF 375W, UHF 125W **\$59<sup>95</sup>**

**IS-B50LU-C1** Frequency Range: 50MHz to 700MHz. Maximum Power: VHF 375W, UHF 125W .....**\$59<sup>95</sup>**

**IS-B50LN-C2** Range: 125MHz to 1000MHz. Max. Power: VHF 375W, UHF (low) 125W, 800MHz-1 GHz 50W. Type N connectors .....**\$59<sup>95</sup>**

**ROTOR CONTROL PROTECTOR**

**IS-RCT** (left) Provides protection for rotor controllers, motors, control box and other nearby equipment. EMP rated-faster than other gas tubes with lower turn-on voltage. Water tight enclosure with mounting stud. 7 1/2" h x 3 3/4" w x 2 1/2" d .... **\$54<sup>95</sup>**

**IN-LINE PHONE LINE PROTECTOR (right)**

**IS-SPTL** Multi-stage protection, with large bandwidth and fast response time, EMP rated. For telephone trunk lines - handles standard ring voltages to 105Vrms. Handles surges up to 36kA .....**\$57<sup>95</sup>**

**POWER LINE EXTENSION PROTECTOR**

In-line, multi-stage EMP rated protectors provide multi-strike power line protection, filtering and proper grounding when equipment use requires extension cord. 2 outlets, master on/off switch, circuit breaker for added protection. All aluminum grounded enclosure, 4 3/4" wide.

**IS-PLDO-120-15A** 15' cord, 120V @ 15A **\$172<sup>95</sup>**

**IS-PLDO-120-20A** 6' cord, 120V @ 20A ...**\$215<sup>95</sup>**

**GROUNDING PANEL**

**CU-SPGP** A .062" thick copper plate mounted on a painted 1/2" plywood backing. Mounting protectors & establish a single ground point for station equipment. Comes with concrete anchors, all mounting screws, 10 ft. of 1 1/2" copper grounding strap, 2 brass sandwich plates & joint compound. 18"x12"h, 16" center mount ..... **\$63<sup>95</sup>**

**LOW INDUCTANCE COPPER STRAP**

Copper strap has an advantage over wire when used for grounds because it has lower inductance and cannot be fused open by lightning. For example: 1 1/2" strap has a lower inductance than #2.0 stranded wire. It's easy to cut, solder, etc. Usable above or in-ground applications, 26 AWG thickness (0.0159"). Available in 1 1/2, 3 & 6 inch widths & 25, 50, 75 or 100 ft. rolls. **See Price List**



**Featuring the COMET  
Exclusive SLC System:**

- **Linear Coil for Maximum Gain**
- **Soldered Element Joints**
- **ABS Radome Joints: Weather Proof/Invisible to RF for the Finest Radiation Pattern**

**COMET** has an extensive line of Mono-Band/Dual-Band/Tri-Band Antennas for Base Station and Repeater use.

**GP-3** • Dual-band 146/446MHz Base Repeater Antenna  
Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 •  
Max Pwr: 200W • Length: 5'11" • Weight: 2lbs. 9ozs. •  
Conn: Gold-plated SO-239 • Construction: Single-piece fiberglass

**GP-6** • Dual-band 146/446MHz Base Repeater Antenna  
Gain & Wave: 146MHz 6.5dBi 5/8 wave x 2 • 446MHz 9.0dBi 5/8 wave x 5 •  
Max Pwr: 200W • Length: 10'2" • Weight: 3lbs. 8ozs. • Conn: Gold-plated SO-239 •  
Construction: Fiberglass, 2 Sections

**GP-9/GP-9N** • Dual-band 146/446MHz Base Repeater Antenna • BEST SELLER!  
Gain & Wave: 146MHz 8.5dBi 5/8 wave x 3 • 446MHz 11.9dBi 5/8 wave x 8 •  
Max Pwr: 200W • Length: 17'8" • Weight: 5lbs. 11ozs. • Conn: GP-9 Gold-plated SO-239 • GP-9N Gold-plated N-type female • Construction: Fiberglass, 3 Sections

**CA-62DB** • Mono-band 6 Meter Vertical  
Gain & Wave: 52MHz 6.5dBi 5/8 wave x 2 • Max Pwr: 500W • Length: 21'8" •  
Weight: 5lbs. 11 ozs. • Conn: SO-239 • 2MHz band-width after tuning (6M) •  
Construction: Thick-wall aluminum, 5 sections

**CX-333** • Tri-band 146/220/446MHz Base Repeater Antenna  
Gain & Wave: 146MHz 6.5dBi 5/8 wave • 220MHz 7.8dBi 5/8 wave x 3 •  
446MHz 9.0dBi 5/8 wave x 5 • Max Pwr: 120W • Length: 10'2" • Weight: 3lbs. 1oz. •  
Conn: Gold-plated SO-239 • Construction: Fiberglass, 2 Sections

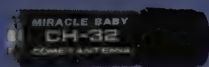
**GP-15** • Tri-band 52/146/446MHz Base Repeater Antenna  
Gain & Wave: 52MHz 3.0dBi 5/8 wave • 146MHz 6.2dBi 5/8 wave x 2 •  
446MHz 8.6dBi 5/8 wave x 4 • Max Pwr: 300W • Length: 5'11" • Weight: 3lbs. 1oz. •  
Conn: Gold-plated SO-239 • Construction: Single-piece fiberglass

For a complete catalog of **COMET** Antenna products call or visit your local dealer. Or, contact **NCG Company** at 800/962-2611. Use **COMET** products, and enjoy amateur radio to it's fullest!

# COMET

1275 N. Grove Street • Anaheim • California 92806  
(714) 630-4541 • (800) 962-2611 • Fax: (714) 630-7024





**CH-32**  
Miracle Baby  
146/446MHz  
HT Antenna  
Gain: 0dBi  
Length: 1.75"  
Conn: BNC

- Gold-Plated Connectors
- High-Quality Craftsmanship
- Unique Fold-Over Feature



**NEW Z750** • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!  
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.5dBi 5/8 wave x 2 • Length: 39" • Conn: Gold-plated PL-259 • Max Pwr: 200W

**NEW Z780** • Dual-band 146/446MHz w/fold-over • Includes COMET exclusive theft-resistant lock!  
146MHz 6/8 wave 4.5dBi • 446MHz 5/8 wave x 3 7.2dBi • Length: 62" • Conn: Gold-plated PL-259 • Max Pwr: 150W

**NEW SBB-15** • Tri-band 52/146/446MHz w/fold-over  
Gain & Wave: 52MHz 0dBi 1/4 wave • 146MHz 4.5 dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: PL-259 • Max Pwr: 120W

**NEW SBB-7/SBB-7NMO** • Dual-band 146/446MHz w/fold-over  
Gain & Wave: 146MHz 4.5dBi 6/8 wave • 446MHz 7.2dBi 5/8 wave x 3 • Length: 58" • Conn: SBB-7 PL-259/SBB-7NMO NMO • Max Pwr: 70W

**NEW SBB-5/SBB-5NMO** • Dual-band 146/446MHz w/fold-over  
Gain & Wave: 146MHz 2.5dBi 1/2 wave • 446MHz 5.5dBi 5/8 wave x 3 • Length: 39" • Conn: SBB-5 PL-259/SBB-5NMO NMO • Max Pwr: 120W

**CX-224/CX-224NMO** • Tri-band 146/220/446MHz w/fold-over  
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 220MHz 3.5dBi 5/8 wave • 446MHz 6.0dBi 5/8 wave x 2 • Length: 36" • Conn: CX-224 PL-259, CX-224NMO NMO • Max Pwr: 100W

**B-20/B-20NMO** • Dual-band 146/446MHz w/fold-over  
Gain & Wave: 146MHz 2.15dBi 1/2 wave • 446MHz 5.0dBi 5/8 wave x 2 • Length: 30" • Conn: B-20 PL-259/B-20NMO NMO • Max Pwr: 50W

**SH-55** • Super Flexible 146/446MHz HT Antenna  
Gain: 146MHz 1.5dBi • 446MHz 3.2dBi • Length: 15.5" • Conn: BNC • Max Pwr: 10W

**B-10/B-10NMO** • Dual-band 146/446MHz cellular look-a-like • Gain & Wave: 146MHz 0dBi 1/4 wave • 446MHz 2.15dBi 1/2 wave • Length: 12" • Conn: B-10 PL-259/B-10NMO NMO • Max Pwr: 50W

**COMET** Specializes in a wide assortment of Mobile Mounting Systems that require NO HOLES. A variety of trunk lid, hatch-back, rain gutter, roof rack and window mounts are available along with low loss coax cable assemblies, for the ultimate mobile station!

For a complete catalog of **COMET** Antenna products call or visit your local dealer. Or, contact **NCG Company** at 800/962-2611. Use **COMET** products, and enjoy amateur radio to it's fullest!



1275 N. Grove Street • Anaheim • California 92806  
(714) 630-4541 • (800) 962-2611 • Fax: (714) 630-7024



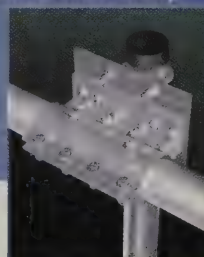
10, 15, 20 Meters  
9 Elements on a 28 ft (8.6m) Boom  
Optional 2 Element 40 Meter Kit

# BIG THUNDER

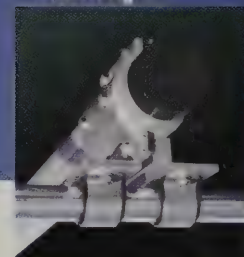
SERIES



Boom to Mast Clamp



Element to Boom Mounting



## The Performance Tribander for the DX Years Just Ahead

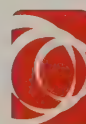
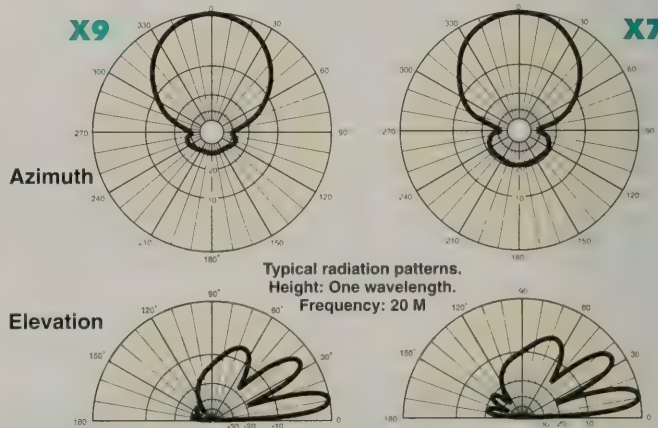
- New High Efficiency Computer Optimized Design for Maximum Gain and Ultra Clean Radiating Pattern
- 100+ MPH Construction for Best Reliability and Long Life
- NEW 4L Log Cell Driven Elements for better VSWR Bandwidth
- Trapless Driven Elements and Reflectors for Reliable Power Handling
- Interleaved Element Design for Mono-Band Performance
- Add-on kits available for 40 Meters

The new X9 and X7 Triband Yagis are geared to set new standards in both radiating performance and mechanical reliability. Cushcraft's product development team has employed the latest computer modeling technology

to achieve a superior electrical design as well as elegant new mechanical hardware and assembly techniques.

Each mechanical component was designed to 100+ MPH wind survival with a 1.25 safety factor. Traps were eliminated from the high current driven elements and reflectors using the new 4L Log Cell design, which yields virtual monoband performance and maximum power handling capability. Traps are employed only in the lower current directors for increased gain and sharper pattern. The result is a truly high performance antenna family which will easily handle the legal limit.

SPECIFICATIONS	X9	X7
Frequency Coverage (Meters)	10, 15, 20	10, 15, 20
Total number of Elements	9	7
Maximum Gain (dB)	20M 13.0 @ 14 deg	12.5 @ 14 deg
@ One Wavelength	15M 13.9 @ 12 deg	13.0 @ 12 deg
	10M 14.0 @ 15 deg	12.9 @ 14 deg
Maximum Front to Back Ratio (dB)	30	30
Number of Elements per Band	4	3
VSWR Minimum	1.1:1	1.1:1
VSWR 1.5:1 Bandwidth (KHz)	20M 350	600
	15M 450	750
	10M 1500	1700
Longest Element, ft (m)	36.5 (11.12)	37.2 (11.33)
Turning Radius, ft (m)	21.7 (6.61)	20.0 (6.09)
Boom Length, ft (m)	28 (8.53)	18 (5.49)
Boom Diameter, in (cm)	2-1/2 (6.35)	2-1/2 (6.35)
Maximum Mast Diameter OD, in (cm)	2-1/2 (6.35)	2-1/2 (6.35)
Maximum Wind Survival, mph (kph)	>100 (>161)	>100 (>161)
Maximum Wind Surface Area, ft <sup>2</sup> (m <sup>2</sup> )	9.9 (.92)	7.9 (.73)
Windload @ 80 mph, lb (kg)	255 (116)	202 (92)
Maximum Power Handling (KW)	2	2
Weight, lb. (kg)	85 (38.5)	60 (27.2)
List Price	\$995	\$675



**CUSHCRAFT**  
COMMUNICATIONS ANTENNAS

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Email: hamsales@cushcraft.com



The all new R7000 is a 10 through 40 meter, no ground radial antenna that is expandable to include the excitement of 80 meters. It includes the best features of its predecessor the R7 plus many more. R7000 means excellent performance, easy installation and use, slim silhouette and high reliability.

### R80 Add-On Kit

80 meters can be easily added to the R7000 with the R80 kit. The kit includes a 40 meter trap, tubing, 80 meter loading coil, UV stable 400 lb. test guy rope and three 20 foot counterpoise wires that attach to your guy points. The R80 counterpoise wires were designed with state-of-the-art anti-resonators to ensure top performance on all bands. The R7000 with R80 kit is pictured to the far right.

- **EXPANDABLE TO 80M**

Transform your R7000 into an R7000+ with R80 kit (trap, tubing, guy & counterpoise wire)

- **RELIABLE**

New trap design is stable in all conditions

- **EASY INSTALLATION**

For typical use, tuning is not needed

- **AUTOMATIC BAND CHANGING**

To any band from 10 through 40m (80m with R80 kit)

- **SLIM SILHOUETTE**

Gain favor of family and neighbors with the slim, smooth profile of our new trap design

MODEL	R7000	R7000+ (w/R80 kit)
Frequency, meters	10,12,15,17, 20,30,40	10,12,15,17 20,30,40,80
Gain, dBi	3	3
Wavelength each bd	Half-wave	Half-wave
VSWR	1.2:1 typical	1.2:1 typical
2:1 bandwidth, KHz	10m (1700) 12m (100) 15m (450) 17m (100) 20m (250) 30m (100) 40m (150)	10m (1700) 12m (100) 15m (450) 17m (100) 20m (250) 30m (100) 40m (100) 80m (70)
Power Rating, Watts	1500	1500
Radiation angle, deg.	16	16
Horizontal rad, deg	360	360
Height, ft(m)	24 (7.3)	34.5 (10.5)
Mast size range, in (cm)	1-3/4 to 2-1/8 (4.4-5.4)	1-3/4 to 2-1/8 (4.4-5.4)
Wind load, ft <sup>2</sup> (m <sup>2</sup> )	2 (0.2)	2.5 (.23) antenna 1.5 (.139) guys
Weight, lb, (kg)	18 (8.2)	24 (10.8)

## Introducing the R7000



**10, 12, 15, 17, 20, 30, 40 Meters**



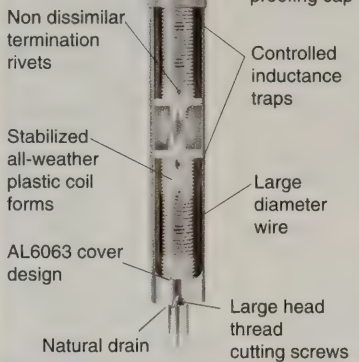


Here's what some of the very first R7000 users have to say.

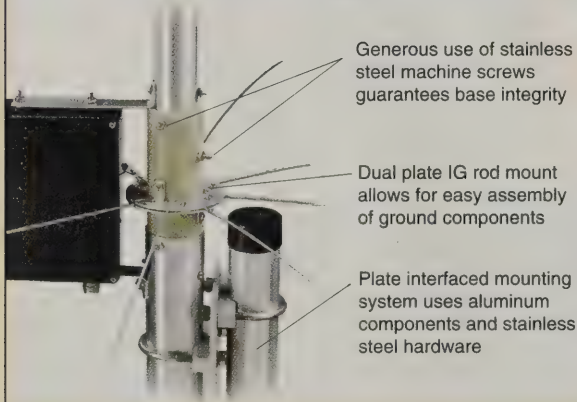
"The antenna is well built. The instructions are very clear with very helpful diagrams . . . Seven bands right out of the box with no tuning is impressive. . . I really like the construction of this antenna, no loose lockwashers to chase around. All stainless steel hardware is top notch. Keep up the good work." WVØH

"The R7000 experienced several hours of 50 mph sustained wind with gusts 70 plus mph. I used the R7000 during this time and noticed no difference in performance . . . I was surprised by being able to easily work western European and western African stations on 17m (from North Dakota) "WBØOAJ

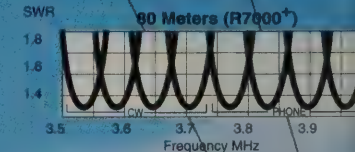
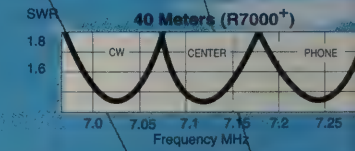
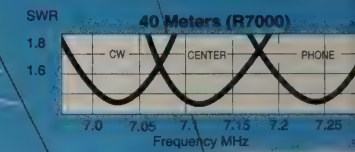
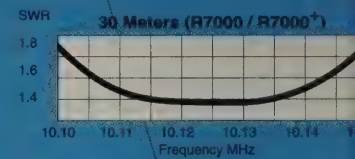
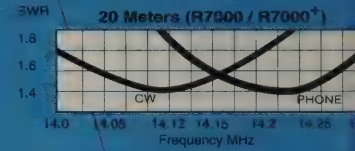
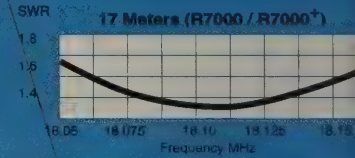
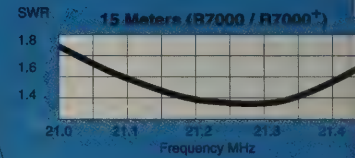
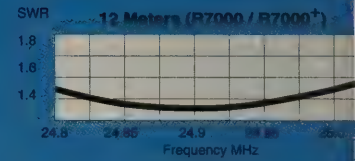
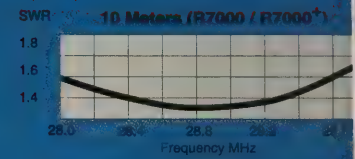
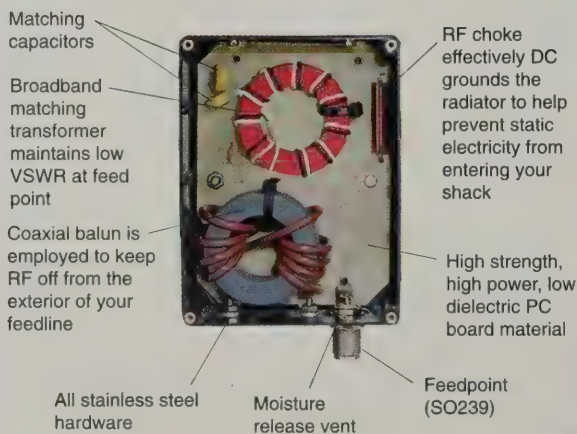
## R7000 Trap



## R7000's Rugged Design



## R7000 Matching Network



10, 12, 15, 17, 20, 30, 40, 80 Meters



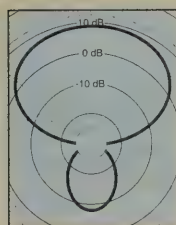
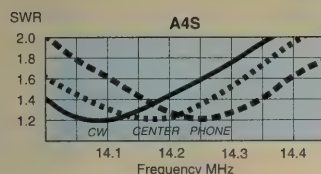
## 10, 15, 20, 40 Meters

### Cushcraft Tribanders Make More DX Fun!

Our three and four element tribanders provide the versatility and performance that you need for reliable communication around the world. And they last! Cushcraft's World Rangers are made with 6063-T832 aluminum tubing, weatherproof traps, and fiberglass insulators to stand up to the weather. Our World Rangers have 50 Ohm twin terminal connectors and need no balun. They are designed with fewer parts for easier assembly, lower weight and less windload. You will spend your time in the shack, not on the tower!

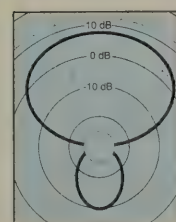
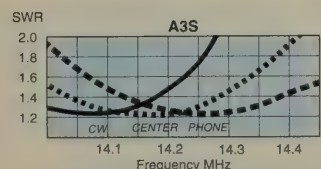
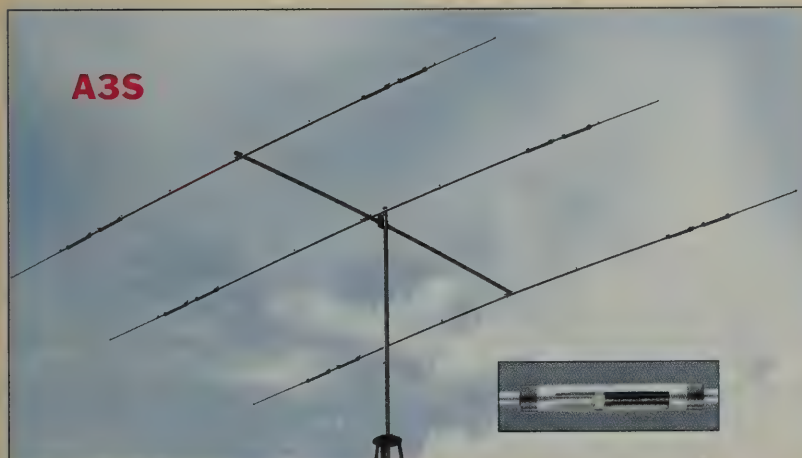
Ham radio is a lot more fun when you have a dependable antenna like our World Ranger. Make your choice from our A4S, A3S and A3WS models. Add a 30 or 40 meter kit to make your antenna even more versatile!

#### A4S with add-on kit



A4S  
RADIATION  
PATTERN

#### A3S



A3S  
RADIATION  
PATTERN

### A4S Four Element Beam

**With stainless steel hardware.**

The A4S is the true, high performance tribander. Precisely tuned high-power traps, carefully selected element lengths, and proper spacing combine to make the A4S the preferred antenna for your contest work! This is the premium antenna with all the features that you want. High gain, low SWR, and wide bandwidth keep the contacts coming in. All U-bolts, clamps and hardware are stainless steel. The A4S has pinned boom sections and formed aluminum brackets to keep elements straight under all conditions. And our solid construction keeps the A4S on the tower!

### A3S Three Element Beam

**With stainless steel hardware.**

The A3 World Ranger, our top selling tribander, has become the A3S with all stainless steel hardware. It's a real power-house in a small space and lets you work the pile-ups with confidence. All you need is a lightweight tower and rotator to enjoy the benefits of the A3S. It's a proven performer in DX-peditions and contests and handles full power from your linear. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware.

When space is at a premium, but you want the benefits of a full-size tribander, the A3S is right for you!

MODEL	A4S	A3S
Frequency, MHz	28, 21, 14	28, 21, 14
No. Elements	4	3
Forward Gain, dBd	8.9	8
Front to Back Ratio, dB	25	25
SWR 1.2:1 Typical		
2:1 Bandwidth KHz	>500	>500
Power Rating, Watts PEP	2000	2000
3 dB Beam Width, Deg. E Plane	58	60
Boom Length, ft (m)	18 (5.48)	14 (4.27)
Boom Diameter, in (cm)	2 (5.10)	1.5 (3.81)
Longest Element, ft (m)	32 (9.75)	27.75 (8.45)
Element Center Dia, in (cm)	1.25 (3.18)	1.25 (3.18)
Turning Radius, ft (m)	18.4 (5.49)	15.5 (4.72)
Mast Size Range, in (cm)	1.25-2.00 (3.18-5.08)	1.25-2 (3.18-5.08)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	5.50 (0.51)	4.36 (0.47)
Weight, lb (kg)	37 (16.8)	27 (12.9)

### 30 and 40 Meter Add-On Kits

40 meters will come alive by adding one of these kits to the dipole of your A3S or A4S. The kits include high power traps with heavy wall fiberglass insulator and all hardware. A simple adjustment allows 30 meter operation. For our newest beam, the A3WS, we have a 30 meter add on kit the A103.

- A743 7 MHz/10 MHz kit for A3S
- A744 7 MHz/10 MHz kit for A4S
- A103 10 MHz kit for A3WS

MODEL	A743/A744	A103
BAND	7 MHz (40 m) 10 MHz (30 m)	10 MHz (30 m)
Driven Element with Adapter kit, ft (m)	33.19 min. 27.12 min. 35.33 max. 28.4 max. (10.12-10.77) (8.27-8.66)	32.1 (9.8)
Windloading ft <sup>2</sup> (m <sup>2</sup> )	.58 (.05) .27 (.03)	.45 (.04)
Bandwidth, KHz	125 150	250
Power Rating, Watts	2000 PEP 2000 PEP	2000 PEP
Side Rejection, dB	20 20	20
Weight, lb (kg)	3.44 (1.56) 2.29 (1.04)	3.25 (1.47)



## 10, 15, 20, 40 Meters



### A4S at VP8SGP

South Georgia Island Dxpedition

Head south from the US and take the last exit before Antarctica and you will be on South Georgia Island. The VP8SGP group activated this rare island and logged over 18,000 QSO's. A favorite antenna of Dxpeditions, this A4S performed flawlessly in these extreme conditions. Try one at your QTH.



MODEL	A3WS
Frequency, MHz	24, 18
No. Elements	3
Forward Gain, dBd	8.0
Front to Back Ratio, dB	25
SWR 1.2:1 Typical	
2:1 Bandwidth	300 KHz
Power Rating, Watts	2000 PEP
3 dB Beam Width, Deg. E Plane	60
Boom Length, ft (m)	14 (4.27)
Boom Diameter, in (cm)	1.50 (3.81)
Longest Element, ft (m)	25.1 (7.66)
Element Center Dia, in (cm)	1.25 (3.18)
Turning Radius, ft (m)	14.4 (4.4)
Mast Size Range, in (cm)	1.25-2 (3.18-5.08)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	4.1 (.38)
Weight, lb (kg)	22.5 (10.2)

### A3WS WARC Bands 3 Element Beam

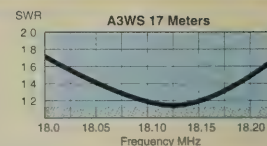
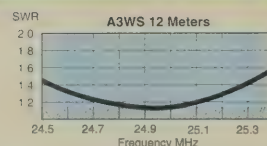
Enjoy the excitement of our newest HF bands with this all new beam. The A3WS gives full performance on 12 and 17 meters. With the addition of our easy-to-use A103 add on kit, it will also cover 30 meters. A3WS needs only a lightweight tower and rotator or you can mount it above an existing tribander. Construction features include pinned boom sections, heavy duty element clamps with backing plates plus all stainless steel hardware. Take charge of 12, 17 and 30 meters with the new A3WS.

### Rotatable Dipoles

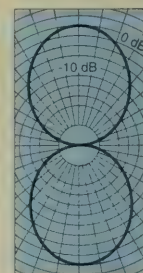
Our World Ranger Dipoles give bi-directional patterns and rotatable convenience. You can mount them high and away from the trees for better performance than a wire dipole. These single and multi-band dipoles feature high-performance traps, heavy wall tubing, and rugged hardware for years of enjoyment.

### D3W World Ranger Dipole

The perfect answer for the WARC bands. This rotatable dipole is easily mounted on the same mast as your existing tri-bander or other antennas. With a bi-directional pattern it will give you amazing performance on the new bands.



**D3W**



Typical Dipole Radiation Pattern

MODEL	D40	D4	D3	D3W
Frequency, MHz	7	28,21,14,7	28,21,14	24,18,10
SWR 1.2:1 Typical				
2:1 Bandwidth, KHz	200	>350 40>125	>500	>200
Power Rating				
Watts PEP	2000	2000	2000	2000
Length ft	42.25	35.8	25.8	34.0
(m)	(12.88)	(10.92)	(7.86)	(10.37)
Mast Size, in (cm)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)	1.5-2 (3.8-5)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.3 (.12)	1.3 (.12)	.9 (.08)	.9 (.08)
Weight, lb (kg)	12 (5)	13 (6)	9 (4)	11 (5)



## 10 Through 20 Meters

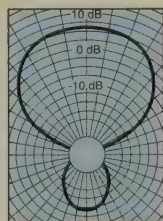
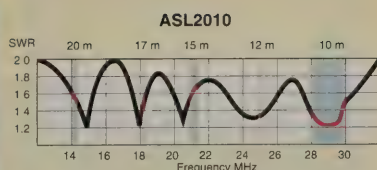
### Skylog

- Continuous five band coverage from 13.5 to 32 MHz
- Constant gain over entire frequency range
- 6.4 dB gain, 65 degree beamwidth
- High efficiency design, antenna stays cool and VSWR steady
- 18 foot boom and 19.5 foot turning radius

This all new log periodic antenna is the most cost effective, high gain, five band antenna solution on the market today. Skylog offers continuous operation from 13.5 to 32 MHz. Antenna gain and beamwidth are constant for uniform coverage from 10 through 20 meters. The ASL2010 is rated for continuous duty at full legal power. Skylog is designed for maximum gain on a manageable 18 foot boom with only 10.1 square feet of wind surface area. All stainless steel hardware and rugged element design are only some of the many features that provide years of superior antenna performance. Skylog ASL2010 is the smart choice for multiband HF operation.

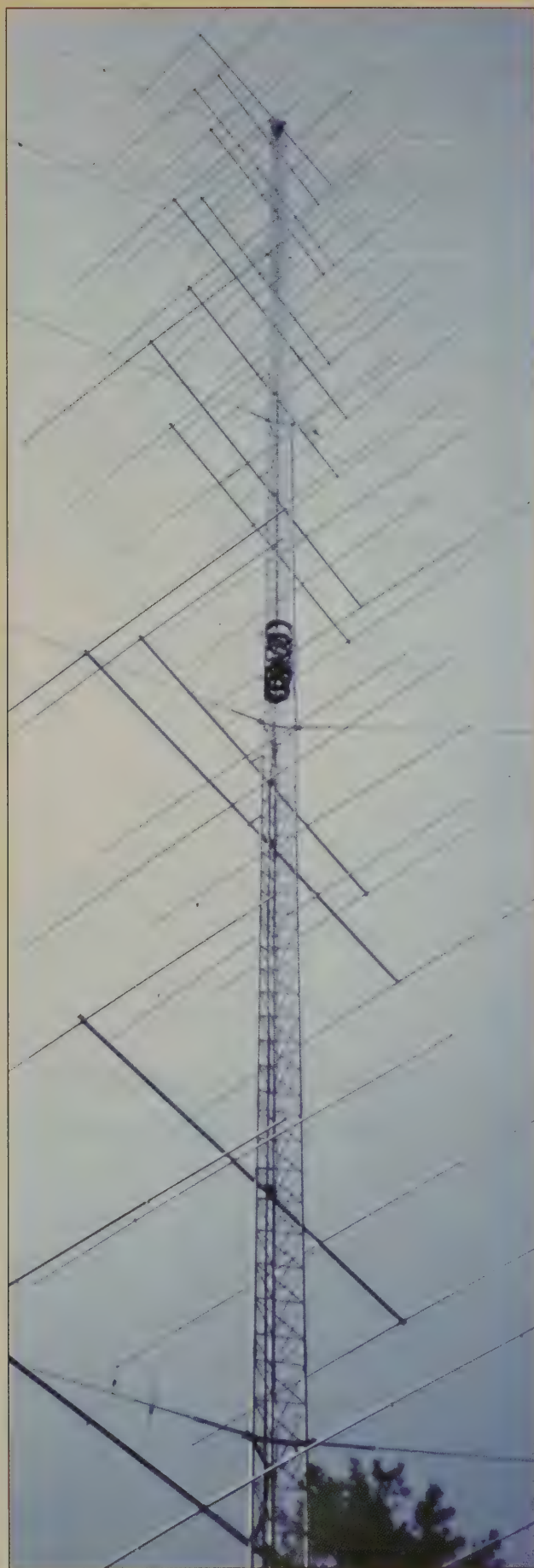


MODEL	ASL2010
Frequency, MHz	13.5-32
No. Elements	8
Forward Gain, dBd	6.4
Front to Back Ratio, dB	15-20
SWR 1.2:1 Typical	
2:1 Bandwidth	18.5 MHz
Power Rating, Watts	2000
3 dB Beam Width, Deg. E Plane	65
Boom Length, ft (m)	18 (5.48)
Boom Diameter, in (cm)	2.0 (5.08)
Longest Element, ft (m)	38 (11.58)
Element Center Dia, in (cm)	1.25 (3.18)
Turning Radius, ft (m)	19.25 (5.86)
Mast Size Range, in (cm)	1.5-2 (3.18-5.08)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	10.1 (.93)
Weight, lb (kg)	55 (25.5)



ASL2010

Cushcraft Yagis “stacked to the sky” on one of the 200 foot towers at KC1XX. This tower has 56 total elements aimed at Europe for contest winning performance. On 15 meters, there are six Cushcraft 154CD Yagis for 4 over 4 over 4 over 4 over 4, (4/4/4/4/4/4). On 10 meters, eight 104CD Yagis are stacked for 4/4/4/4/4/4/4/4. KC1XX has never been known to “lose” a frequency.





## 10, 15 Meters



### 10 Meters

The three element model is a great selling antenna! If you have the space, and need the utmost in performance, then try our four element Skywalker. You can't go wrong with these contest winners, especially if you are a Novice new to ten meters!

MODEL	10-4CD	10-3CD
Frequency, MHz	28.0-29.7	28.0-29.7
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	>900	>1400
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	40	40
Boom Length, ft (m)	16 (4.88)	10 (3.05)
Boom Diameter, in (cm)	2.0 (5.08)	1.63-1.50 (4.1-3.8)
Longest Element, ft (m)	17.58 (5.34)	17.66 (5.38)
Element Center Dia, in (cm)	.88-.63 (2.2-1.6)	.88-.63 (2.2-1.6)
Turning Radius, ft (m)	11.5 (3.5)	10 (3.05)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.1)	1.5-2.0 (3.8-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	3.1 (.29)	2.3 (.21)
Weight, lb (kg)	18 (8.16)	11 (5.00)

### More Performance Than You Ever Imagined

More contacts, less waiting, less interference, and a better signal at the other end are yours with a Skywalker!

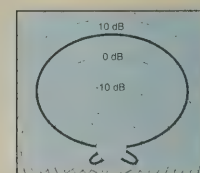
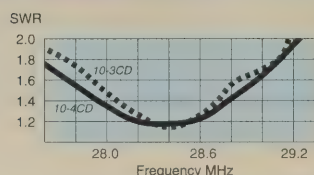
Computer-aided design helped us maximize forward gain while reducing sidelobes and SWR. Our 50 Ohm Reddi-match feed uses a UHF SO-239 for easy connection.

Construction features include improved larger diameter pinned booms with fewer sections, heavy-wall heat treated 6063-T832 aluminum tubing, stainless steel fasteners, worm drive element clamps, and carefully formed aluminum brackets.

Assembly is easy and installation can often be done by one person! Skywalkers are contest winners. One of these fine antennas is perfect for you.



**10-3CD**



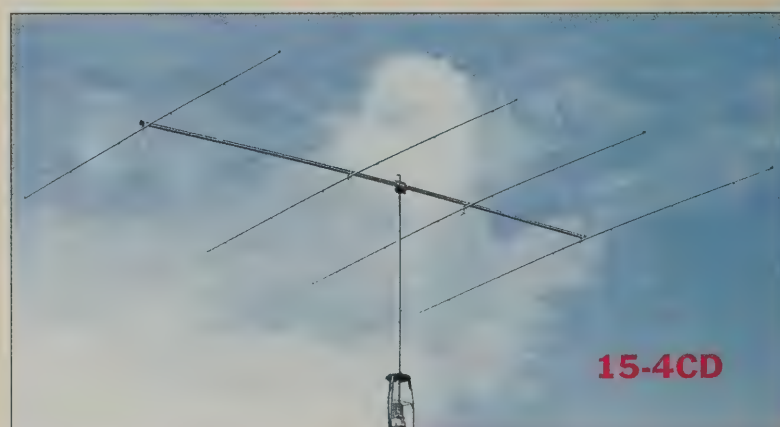
Typical 3 Element Pattern

### 15 Meters

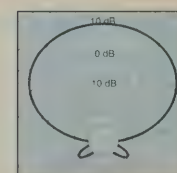
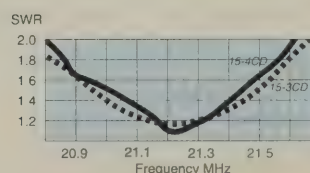
These two Skywalkers will keep you enthusiastic about 15 meters. Our three element model gives fine performance in limited areas. For maximum gain, select the four-element model with its new 2" diameter boom. Or, try stacking two four element Skywalkers for incredible performance! Reddi-match tuning makes it easy.

The 10dB forward gain of our 15-4CD is the result of computer design and will keep you the first in line during pileups!

MODEL	15-4CD	15-3CD
Frequency, MHz	21.0-21.45	21.0-21.45
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	500	500
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Deg. E Plane	56	57
Side Lobe Attenuation, dB	>40	>40
Boom Length, ft (m)	20 (6.10)	14 (4.27)
Boom Diameter, in (cm)	2.0 (5.08)	2.0 (5.08)
Longest Element, ft (m)	23.33 (7.11)	23.16 (7.06)
Element Center Dia, in (cm)	1 (2.5)	1 (2.5)
Turning Radius, ft (m)	15.4 (4.72)	13.5 (4.11)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.1)	1.5-2.0 (3.8-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	4.5 (.42)	3.4 (.32)
Weight, lb (kg)	25 (11.34)	20 (9.07)



**15-4CD**



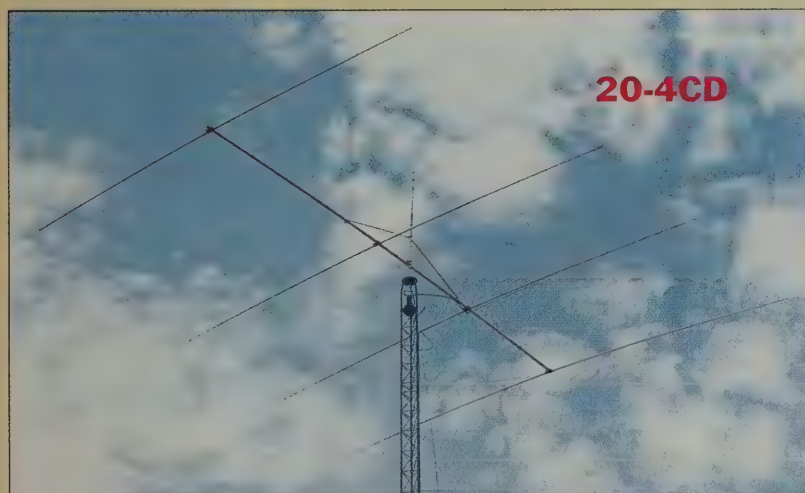
Typical 3 Element Pattern



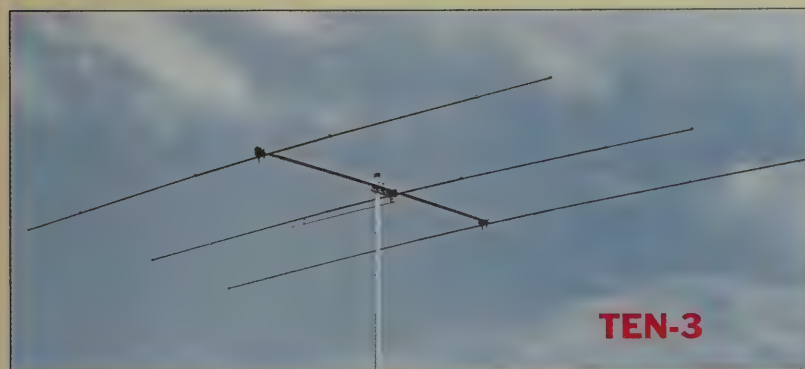
## 10, 20, 40 Meters



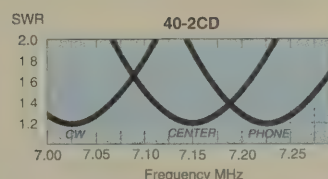
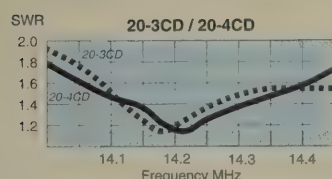
**40-2CD**



**20-4CD**



**TEN-3**



### 40 Meters

This Skywalker holds the North American contact record for 40 meters. A two element compact antenna, it has the performance that you want for 7 MHz work. The dipole center insulator is heavy duty with a twin terminal 50 Ohm connection. It is by far the most popular two element 40 meter beam!

### 20 Meters

Our four-element 20 meter Skywalker and its three element compact version will punch your signal through the QRM.

Stainless steel fasteners and double U-bolt brackets ensure that your antenna will last for years.

### 10 Meters TEN-3

Looking for a lightweight, economical alternative to the 10 meter Skywalkers? Choose the TEN-3. Although its popular with novices and technicians, this antenna is for any ham who wants more gain with a good front to back ratio on 10 meters. This antenna has an 8 foot boom making it easy to install on a very simple mount with only a lightweight rotator. The matching system is our proven Reddi Match for 50 Ohm no balun feed and SO-239 connector. Make more positive contacts with the new TEN-3.

MODEL	40-2CD	TEN-3
Frequency, MHz	7.0-7.3	28-29.7
No. Elements	2	3
Forward Gain, dBd	5.5	8
Front to Back Ratio, dB	20	25
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	200	>1500
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	70	64
Side Lobe Attenuation	>40	>40
Boom Length, ft (m)	23(6.9)	8 (2.44)
Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	1.38-1.25(3.5-3.2)
Longest Element, ft (m)	43 (12.9)	18 (5.49)
Element Center Dia., in (cm)	1.25 (3.1)	.75 (1.9)
Turning Radius, ft (m)	23.93 (7.29)	9.8 (3.0)
Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	6.38 (.57)	2.0 (.20)
Weight, lb (kg)	44 (19.8)	9.9 (4.45)

MODEL	20-4CD	20-3CD
Frequency, MHz	14.0-14.35	14.0-14.35
No. Elements	4	3
Forward Gain, dBd	10.0	8.0
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth, KHz	>400	>300
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	56	57
Side Lobe Attenuation, dB	>40	>40
Boom Length, ft (m)	32 (9.75)	20 (6.1)
Boom Diameter, in (cm)	2.13-1.88(5.4-4.8)	2.0 (5.08)
Longest Element, ft (m)	36.08 (11.00)	35.95(10.96)
Element Center Dia., in (cm)	1.25 (3.1)	1.25 (3.1)
Turning Radius, ft (m)	23.75 (7.2)	20 (6.1)
Mast Size Range, in (cm)	1.5-2(3.8-5.1)	1.5-2(3.8-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	8.1 (.75)	5.5 (.51)
Weight, lb (kg)	55 (24.95)	30 (13.61)



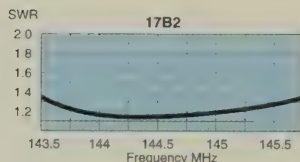
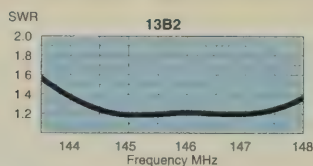
### 17B2 - 17 Element CW/SSB

The serious two meter operator who is interested in EME, aurora, scatter, SSB, CW, tropo etc, will choose the 17B2. It has 17 elements on a 4.5 wavelength boom. Our computer-aided design supported by precise test range data and the latest manufacturing technology gives you a cleaner pattern and 18 dBd gain in this long boom design. Significant enhancement is provided by the new UltraMatch balanced feed system with N-connector. The improved Boomer brace system is easier to install. 17B2 is a new stronger Boomer with a cleaner profile, less weight and wind load. All these features result in contest winning performance and more day to day operating enjoyment.

### 13B2 -13 Element Wideband

The new 13B2 is as versatile as the 17B2 is specialized. 13B2 will be your choice for high performance across the entire 2 meter band. New and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband across the 4 MHz operating range. The 13B2 is easily mounted vertically or horizontally for maximum performance on your favorite mode. Its optimum boom length makes it a popular antenna that fits just about anywhere. The new UltraMatch balanced feed on the 13B2 provides a 50 Ohm match via a standard SO-239 UHF female connector.

MODEL	13B2	17B2
Frequency, MHz	144-148	144-145
No. Elements	13	17
Forward Gain, dBd	15.8	18.0
Front to Back Ratio, dB	26	26
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>2
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 18	2 x 14.5
H Plane	2 x 19	2 x 15
Side Lobe Atten., dB, E Plane	>60	>60
Boom Length, ft (m)	15 (4.57)	31 (9.45)
Electrical Wavelength	2.2	4.5
Longest Element, in (cm)	39.75 (101)	40.75 (103.5)
Turning Radius, ft (m)	8.9 (2.7)	17.25 (5.26)
Mast Size Range, in (cm)	1.5-2	1.5-2
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.8 (.17)	3.9 (.36)
Weight, lb (kg)	6.7 (.31)	15.75 (7.14)



Boomers are easily stacked for more gain. See page 17 for details.

"The 13B2 was very easy to assemble. Very good instructions. High quality parts. A very neat looking antenna." (NM8T)

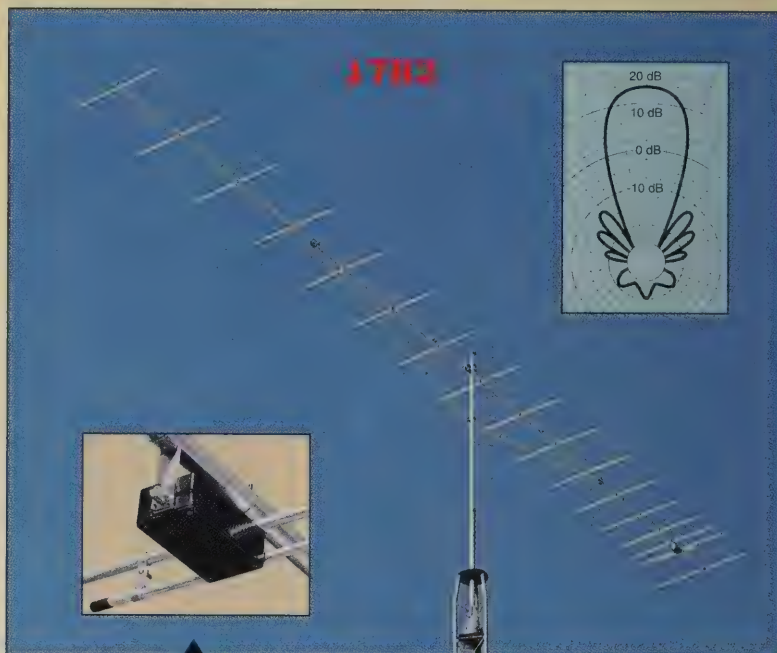
"Reliable contacts [on 13B2] to repeaters 100 miles using low power. Horizontally polarized 150 miles plus." (N9MHV)

"New 17B2 is nice improvement over 4218XL both mechanically and electrically." (VE3ASO)

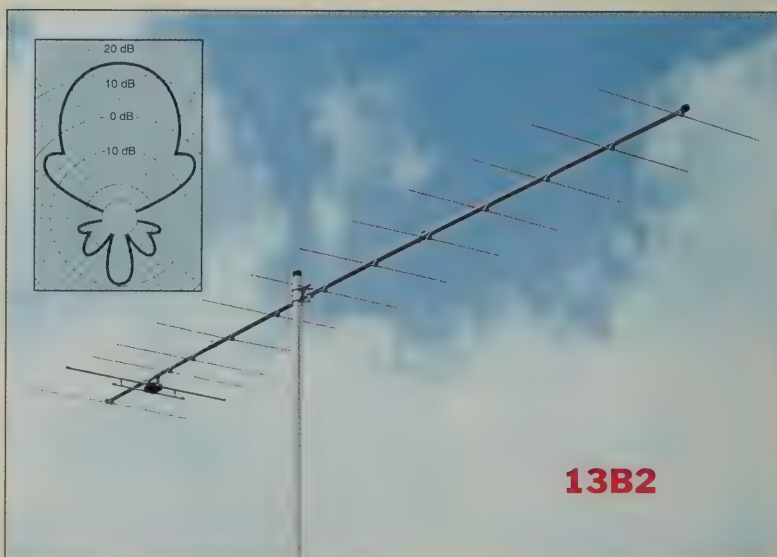
### The Boomer tradition continues.

New Boomers offer more gain and cleaner patterns with greater mechanical strength. New element spacings and lengths plus an improved feed system make it happen. Select from the 17B2 for the strongest signal on the low end of the band or the 13B2 for broadband performance across the band.

Cushcraft Boomers all feature solid rod elements, stainless steel hardware and very easy to follow assembly instructions. Simple tools and a little time are all that are needed for assembly. The new Boomer line will make your operating time more rewarding and enjoyable. Move up to the new Boomers today.



The new Cushcraft UltraMatch is a modified T-match system that provides a balanced current distribution on your Boomer. It uses UltraLink teflon® dielectric cable allowing for low loss high power applications. UltraMatch is completely enclosed for weather proofing. UltraMatch features an N-connector on the 17B2 and UHF SO239 on the 13B2. When all weather performance is important, you will choose the new UltraMatched Boomers everytime.





## 70 CM, 1 $\frac{1}{4}$ , 6 Meters



### 1-1/4 Meters

We took the features of our 2 meter antennas and incorporated them into a high-gain 1-1/4 meter antenna that is perfect for this fast growing band. You will have more fun with Cushcraft!

### 6 Meters

Our 617-6B has more gain than any antenna in its class! The serious 6 meter operator will appreciate the features of this great performing Boomer. Find out for yourself.

MODEL	617-6B	220B
Frequency, MHz	50-51	222-223
No. Elements	6	17
Forward Gain, dBd	14.0	17.2
Front to Back Ratio, dB	30	30
SWR 1.2:1 Typical		
2:1 Bandwidth MHz	>1	>2
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	2 x 19	2 x 13
H Plane	2 x 20	2 x 14
Side Lobe Atten., dB, E Plane	60	60
Boom Length, ft (m)	34 (10.36)	19 (5.8)
Electrical Wavelength	1.7	4.2
Longest Element, in (cm)	117 (297.2)	26 (66.2)
Turning Radius, ft (m)	17.7 (5.39)	9 (2.64)
Mast Size Range, in (cm)	1.5-2	1.5-2
	(3.8-5.1)	(3.8-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	4.8 (.45)	2.6 (.24)
Weight, lb (kg)	26 (11.79)	10.5 (4.77)



### 719B FM, CW and SSB 15.5 dBd

Looking for an antenna to enhance performance on all modes of the 70 CM band? The 13.5 foot long 719B is the right choice. Mount it vertical for FM or horizontal for CW and Sideband. The 719B joins the 2 meter 13B2 as a classic for improved performance.

### 729B CW and SSB 17.8 dBd

This is the new leader in performance for 70 CM activity. Assembly is easy. Tuning is even easier with our modified T-matching network. The modified-T allows for increased bandwidth over conventional T-matches. It includes capacitive elements which allow for more adjustment. Teflon® cable is used for power efficiency. The non-drooping boom does not require a support strut. Mount several in an array for increased gain.

## Two NEW 70 CM Yagis

These new Cushcraft antennas are designed for easy assembly. The elements are mounted atop the boom with stainless traditional hardware. The feed systems employ a UM4N balun enclosed in a UV stabilized housing. The 719B uses a broadband folded dipole while the 729B utilizes a modified T-match.



MODEL	719B	729B
Frequency, MHz	430-450	430-440
No. Elements	19	29
Forward Gain, dBd	15.5	17.8
Front to Back Ratio, dB	25	25
SWR 1.2:1 Typical		
2:1 Bandwidth MHz	20	>10
Power Rating, Watts PEP	2000	2000
3 dB Beamwidth, Degrees		
E Plane	24	20
H Plane	19	22
Side Lobe Atten., dB, E Plane	60	60
Boom Length, ft (m)	13.5 (4.1)	22.17 (6.75)
Electrical Wavelength	6	9.8
Longest Element, in (cm)	13.75 (34.9)	13.75 (34.9)
Turning Radius, ft (m)	7.25 (2.2)	12.5 (3.8)
Mast Size Range, in (cm)	1.25-2	1.25-2
	(3.2-5.1)	(3.2-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.2 (.11)	2.2 (.21)
Weight, lb (kg)	5.6 (2.55)	8.6 (3.9)



## 1 1/4, 2 Meters

### 13B2 - 13 Element Wideband

Boomer evolution continues with the 13B2. This new design is lighter weight, lower profile and has more gain and a cleaner pattern. New technicians and experienced hams will enjoy 15.8 dBd gain on FM, packet, CW, or sideband. 13B2 is easily mounted vertically for greatest FM distance and enjoyment. Its optimum boom length makes it a popular antenna that fits almost anywhere. The new balanced UltraMatch provides a 50 Ohm UHF connector for easy feedline attachment. Stronger performance in the 215WB tradition will be yours with the 13B2.

### 124WB - 4 Element Wideband

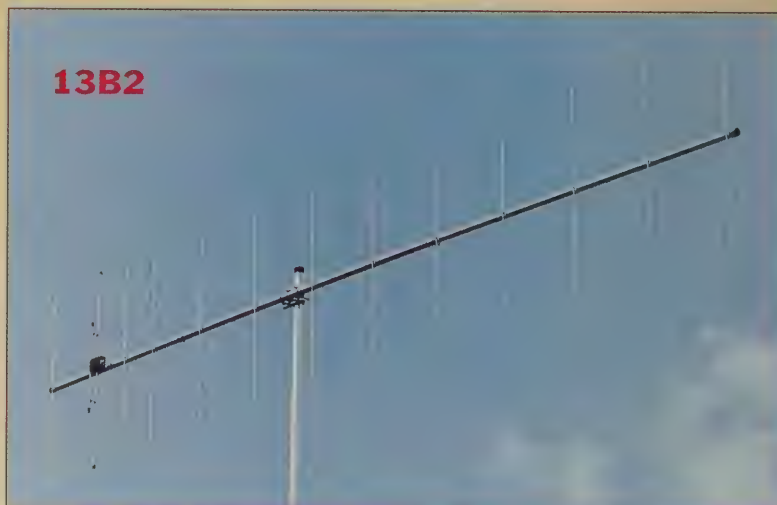
This is the right choice for packet systems and other applications requiring a dedicated directional antenna.

*All of these antennas give you hot performance with light weight and minimum windload. Stainless steel hardware, solid rod elements and hard drawn aluminum tubing assure you that the antenna will last.*

MODEL	124WB	13B2	26B2
Frequency, MHz	144-148	144-148	144-148
No. Elements	4	13	26
Forward Gain, dBd	10.2	15.8	18.8
Front to Back Ratio, dB	19	26	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>4	>4	>4
Power Rating, Watts PEP	2000	2000	2000
3dB Beamwidth, Degrees			
E Plane	60	2x18	2x18
H Plane	88	2x19	2x9.5
Side Lobe Attenuation, dB, E Plane	40	>60	>60
Boom Length, ft (m)	4 (1.22)	15 (4.57)	15 (4.57)
Electrical Wavelength	.5	2.2	2.2
Longest Element, in (cm)	40.75 (104)	39.75 (101)	39.75 (101)
Turning Radius, ft (m)	4 (1.22)	8.9 (2.7)	10.4 (3.18)
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	.34 (.034)	1.8 (.17)	4.84 (.45)
Weight, lb (kg)	3 (1.36)	6.7 (.31)	21.5 (9.75)

MODEL	224WB	225WB
Frequency, MHz	222-225	222-225
No. Elements	4	15
Forward Gain, dBd	10.2	15.5
Front to Back Ratio, dB	24	24
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>5	>5
Power Rating, Watts PEP	2000	2000
3dB Beamwidth, Degrees		
E Plane	60	2x17
H Plane	88	2x19
Side Lobe Attenuation, dB E Plane	40	60
Boom Length, ft (m)	3 (.91)	10 (3.05)
Electrical Wavelength	0.5	2.2
Longest Element, in (cm)	26.7 (68)	26.3 (67)
Turning Radius, ft (m)	3 (.91)	5.8 (1.78)
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)	1.25-2 (3.2-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	.23 (.021)	.95 (.09)
Weight, lb (kg)	1.7 (.77)	5.25 (2.4)

13B2



124WB



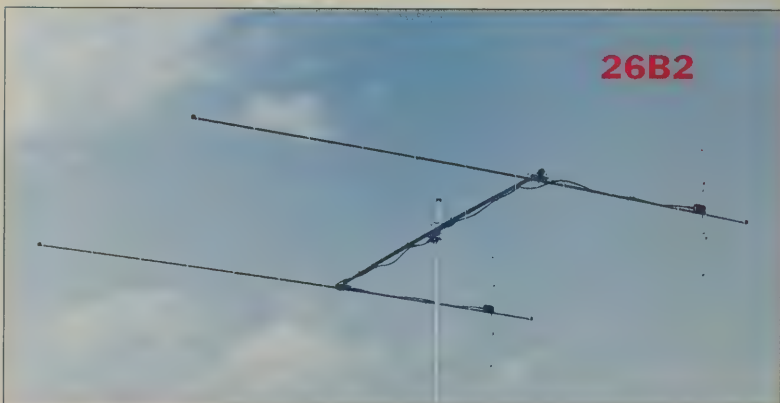
### 224WB/225WB - 220 MHz Widebands

Perfect for the novice phone band and other 220 MHz operation.

### 26B2 - 26 Element Wideband

This antenna offers the highest gain of any 2 meter FM antenna in the world. Select the 26B2 when you need to work repeaters or simplex over extreme distances.

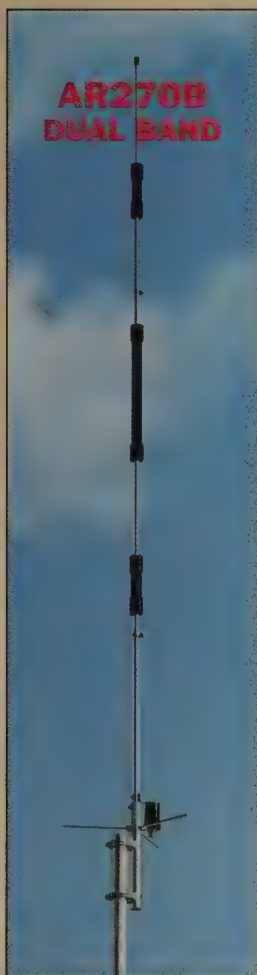
26B2





## 70 CM, 2 Meters

Cushcraft brings you the leading edge of dual band technology with new 70cm/2m products - The All-American Dual Bander, a high performance fiberglass base antenna, the long range AR270B and the CS270M mobile mag-mount. These great products will complement our already proven AR270 dual band compact base antenna.



### AR-270B 5.5/7.5 dB Dual Band Ringo

This all new model gives very high gain with a low angle of radiation and it is only 7.7 feet (2.35 m) high. The AR270B is computer optimized with two 5/8 wavelength collinear elements on 2 meters and four 5/8 wavelength elements on 70 cm. It is broadbanded for minimum SWR on both bands. It is easy to assemble with three rugged aluminum tubing sections, a durable mast mount and factory sealed coils for best performance.

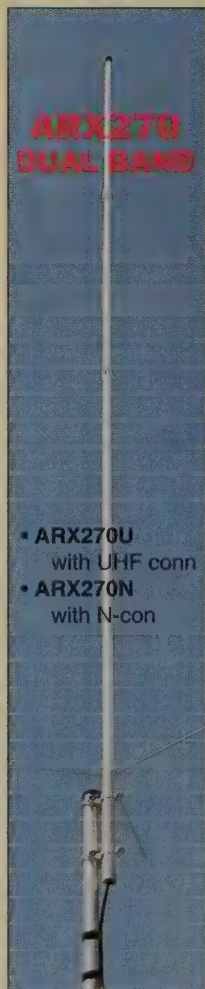
MODEL	AR270		AR270B	
Frequency, MHz	144-148	430-450	144-148	430-450
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	>4	>15	>4	>15
Gain, dB	3.7	5.5	5.5	7.5
Power, Watts FM	250	250	250	250
Horizontal Radiation				
Pattern, Degrees	360	360	360	360
Height, ft, (m)	3.75 (1.13)		7.7 (2.3)	
Mast Size Range, in	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Radial Length, in (cm)	6.75 (17.1)		6.75 (17.1)	
Wind Load, ft2 (m2)	0.27 (0.03)		0.47 (0.044)	
Weight, lb (kg)	2 (0.9)		2.4 (1.09)	

### AR270 3.7/ 5.5 dB Dual Band Ringo

The "Dual Wonder" AR270 is only 3.75 feet (1.1 meters) high. It has great performance for its size, making it the most popular 2m/70 cm base antenna.

### All-American Dual Band Ringo

Cushcraft's new ARX270 high performance fiberglass base antenna yields a gain of 9 dB on VHF and 12 dB on UHF. Our exclusive non-metallic UV stabilized couplings result in the cleanest pattern of any dual band antenna. The radome is bright white, thick-wall fiberglass that will survive 90 mph winds. The three section design allows easy assembly and is U.P.S. shippable. Our sleek extruded base clamps eliminate vibration and they look great. Professional features like the factory installed pigtail feed and choice of UHF or N connector makes weather-proof connections easy. These technical innovations put the ARX270 miles ahead. The All-American Dual Bander comes factory tuned and does not require any adjustments. The ultimate in dual-band FM enjoyment can be yours with the ARX270.

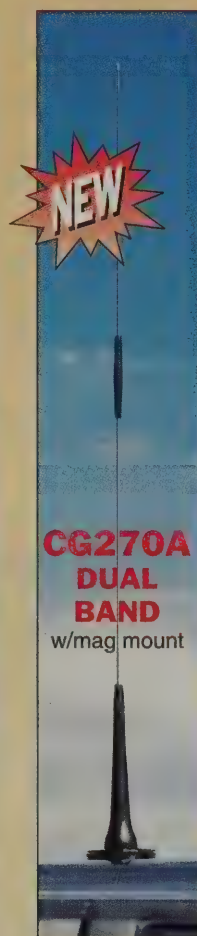


- ARX270U with UHF conn
- ARX270N with N-con

## Introducing Cushcraft Gold!

### The Gold Standard in Mobile Design!

Style, Performance, and Price. Cushcraft selected an award winning industrial design firm to develop an aesthetically pleasing, unique profile for automotive travel in the 90's, and our RF design team engineered in new standards of quality, performance and features. We call it Cushcraft Gold. This slim-line, aerodynamic design antenna provides 5.5 dB on 440 and 3.7 dB on 2 meters. Cushcraft Gold starts with a solid brass base which is nickel plated, then powder coated to look and work like new for years. The base assembly is engineered to resist shock and vibration. A stainless steel spring and nickel plated base contact assure maximum RF transfer. The weather resistant rubber O-ring around the base, helps keep out moisture and provides for scratch free roof-mounting. Both the base matching network and the center phasing coil are housed, inside temperature and shock-resistant Delrin®. The whip is heavy duty stainless-steel to resist corrosion. We've even included a unique tilt-over feature so you don't have to remove the whip to enter a garage with a low ceiling. This is all the antenna you'll need for years of trouble-free communications. Available with Mag-mount or mount to existing 3/4" roof mount.



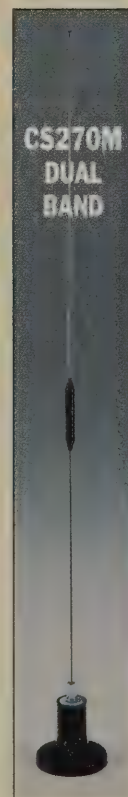
**CG270A  
DUAL  
BAND**  
w/mag mount

MODEL	ARX270U/N	
Frequency, MHz	144-148	430-450
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>20
Gain, dB	9	12
Power Rating, Watts FM	200	200
Horizontal Radiation		
Pattern, Degrees	360	360
Height, ft, (m)	16.5 (5)	
Mast Size Range, in	1.25-2 (3.2-5.1)	
Radial Length, in (cm)	20.5 (52.1)	
Wind Load, ft2 (m2)	0.95 (0.088)	
Weight, lb (kg)	5 (2.3)	

### CS270M 70 CM / 2M Mobile

The CS270M offers the most gain possible in its compact size. It has 6 dB on 440 and 3.7 dB on 2 meters all in a 36-1/2" tall design. The small coil is insert molded into the center of the radiator. No moisture can penetrate the coil with this technique. The magnetic mount features a clinging 90 pound pull and a roof-protecting rubber pad. The feed line is double shielded Teflon® UltraLink Cable.™ Its low-loss, high temperature and designed to last. The CS270M has all of the features you will need in a dual-band mobile antenna.

See page 12.





70 CM, 1 $\frac{1}{4}$ , 2 Meters



## Our Ringos are Number One.

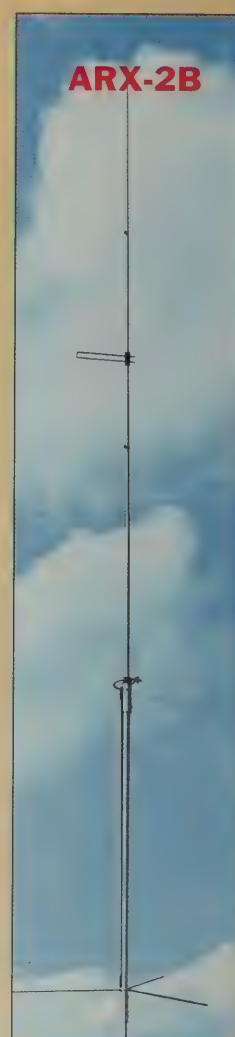
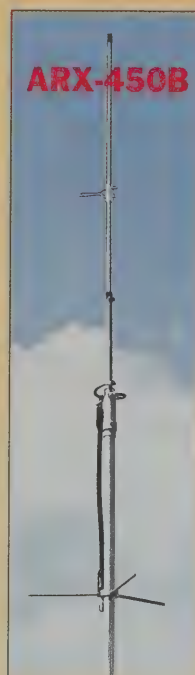
Tough performers at a good price! The Ringo family of dependable, cost-effective antennas has served more hams - from novice to veteran extra - than any other amateur antenna made. Simple, straightforward design, light weight and quick, easy installation make the durable Ringo family right for you. Ringo's top performance and low cost mean more dB per dollar - an equation anyone can appreciate.

## Ringo Ranger II

Our Ringo Ranger II has more gain, less windload, and more mechanical integrity than other two meter antennas. You'll quickly appreciate the benefits of this amazing antenna! Based on the original W1BX Ringo, the Ringo Ranger II is the latest design featuring three 5/8 wave radiating elements and an adjustable 1/8 wave phasing stub. The result is a very low angle of radiation over your coverage area.

The Ringo Ranger II has built-in lightning protection, UV-stabilized insulators, heavy wall tubing, improved decoupling radials to eliminate feedline radiation, and all-weather performance. The ARX-450BN has all the features of the standard antenna plus N-connector.

MODEL	ARX-2B	ARX-220B	ARX-450B
Frequency, MHz	135-160	222-225	435-450
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	>5	>10
Gain, dB	7.0	7.0	7.0
Power Rating, Watts FM	1000	500	500
Radiation Angle, Deg.	7	7	7
Horizontal Radiation			
Pattern, Degrees	360	360	360
Ring Diameter, in (cm)	5 (12.7)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	.75 (1.9)	.50 (1.2)
Height, ft, (m)	14 (4.3)	9.3 (2.8)	4.9 (1.5)
Mast Size Range, in (cm)	1.0-1.25 (2.54-3.1)	1.0-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Radial Length, in (cm)	20.5 (52.1)	13.75 (33.7)	6.75 (17.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	0.5 (0.05)	0.3 (0.03)	0.2 (0.02)
Weight, lb (kg)	6 (2.7)	5 (2.3)	1 (.45)



### Some hams comment on the ARX-2B:

"Since I put this antenna up I have received many compliments on the improvement of my signal." (N3LHP)

"The only antenna I ever installed that worked like it should the first time." (N7PGH)

"ARX-2B is a good antenna for my use on 2 meters FM...Several on the air in my area." (N9OPL)

"ARX-2B...the best antenna." (XE2CLB)



## A270-10S and A270-6S 10 and 7.8 dB Dual Band Yagis

Increase your range by selecting one of the new Cushcraft dual band Yagis on 2 meters and 70 cm. You can point the antenna at stations while you are in QSO with them. This will direct more of your output power when transmitting at the same time reducing interference and increasing signal strength when receiving. These antennas are perfect for packet applications. Assembly is a snap with our

MODEL	A270-10S		A270-6S	
Frequency, MHz	144-148	430-450	144-148	430-450
No. Elements	5	5	3	3
Forward Gain, dB	10	10	7.8	7.8
Front to Back Ratio, dB	20	18	20	18
SWR 1.2:1 Typical				
2:1 Bandwidth, MHz	≥4	≥10	≥4	≥20
Power Rating, Watts PEP	350	350	350	350
3dB Beamwidth, Degrees				
E Plane	52	52	66	66
H Plane	60	60	108	108
Boom Length, ft (m)	6.17 (1.9)		2.8 (.85)	
Longest Element, in (cm)	40.3 (102.4)		41 (104.1)	
Turning Radius, ft (m)	6 (1.8)		2.8 (.85)	
Mast Size Range, in (cm)	1.25-2 (3.2-5.1)		1.25-2 (3.2-5.1)	
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	.725 (.07)		.3 (.02)	
Weight, lb (kg)	1.8 (.81)		1.7 (.8)	

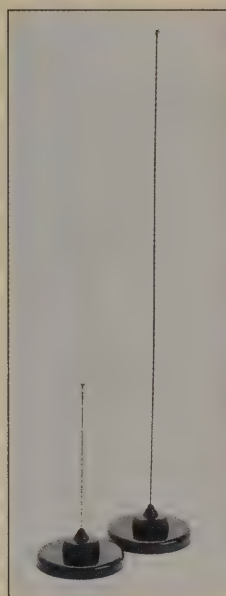
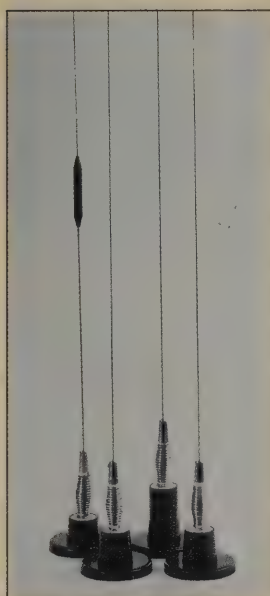
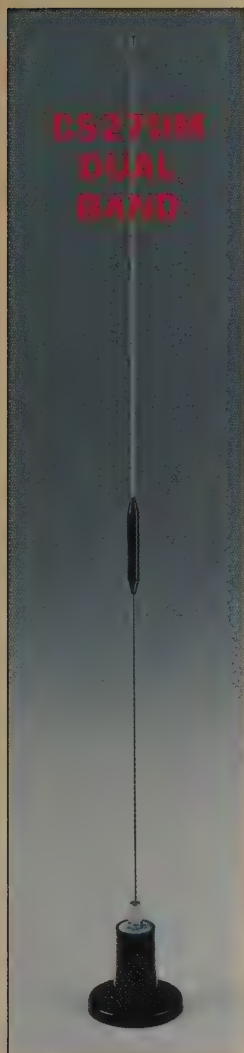
fully illustrated assembly manuals. The A270-10S has nearly twice the performance of the A270-6S. Select the antenna for your station depending on the distance of your contacts.



70 CM, 1 1/4, 2, 6, 10 Meters

Cushcraft/Signals mobiles offer the high performance that you need for consistent and mobile communications such as commuting and public service activities. These antennas are the choice of hams and communications professionals around the world who demand high quality, premium products.

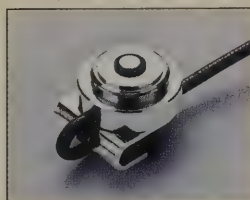
SEE YOUR LOCAL DEALER'S CUSHCRAFT MOBILE DISPLAY



BLACK MAG MOUNT

TRUNK LIP MOUNT

UltraLink Cable™



## UltraLink™ Cable

Cushcraft UltraLink cable was designed specifically for high efficiency commercial mobile applications to 900 MHz. UltraLink's RG-58 size allows easy installation through the tightest openings, while its Teflon® dielectric provides the highest temperature tolerance to handle vehicle hot-spots that would melt other dielectric materials. Additional 100% shielding is provided by a jacket of easy-peel foil. All this is covered by 97% braid for easy, secure connector attachment. More of your signal will get through with UltraLink than with any other mobile cable.

## CS28M Ten Meter Mag-Mount

Work a new country while you wait for the light to change. Introduced just last year, the CS28M ten meter mag-mount has become a constant companion to today's popular 10 meter multimode mobile rigs. The CS28M comes complete, ready to go with a 49" stainless steel whip and spring and a Euro-Style black poly-coated 90 pound pull magnet. A heavy rubber pad protects your car's finish; twelve feet of Cushcraft's own UltraLink™ low-loss cable (specifically designed for commercial mobile applications to 900 MHz) and PL259 connector are included with the CS28M.

## Gain and Quarterwave Mobile Antennas

Cushcraft's years of commercial and amateur experience apply cutting-edge designs to consistently high quality materials to produce the best mobile antennas you can buy.

All inductors (and even the coil contacts) are silver plated for better RF conductivity, and all Cushcraft mobile hardware is brass to prevent the seizing inherent with inferior, dissimilar-metal joints. All Cushcraft mobile coil housings are ABS, impervious to temperature changes and ultraviolet radiation. Brass base threads, ultrasonically welded into coil housings, eliminate premature failures associated with inferior fastening techniques, and Cushcraft insert-molded 440 MHz phasing coils assure weather-tight integrity. Only Cushcraft mobile antenna mounts are entirely 50 Ohms, eliminating lossy "VSWR bumps" common in many well known designs. Cushcraft quarter-wave models (CS1147 and CS1450) are broadband, require no tuning and include UltraLink™ low loss cable.

## Magnetic Mounts

Cushcraft mag-mounts stay where you put them. Our 90 pound pull magnets are the strongest you'll find. Euro-style black poly finish protects against rust, and a tough rubber pad gives maximum protection to your vehicle's finish. Ultra-Link™ cable on all Cushcraft mobile antennas means more of your signal reaches your antenna every time you key the mike.

Model No.	Frequency MHz	Whip Length in	Whip Length m	Description
CG270A	144-148 / 440-450	34	.86	3/4" Hole
CG270AE	144-146 / 430-440	34	.86	3/4" Hole
CG144A	144-148	49	1.25	3/4" Hole
CG144AE	144-146	49	1.25	3/4" Hole
CS270M	144-148/440-450	34	.86	Magnetic
CS270A	144-148/440-450	34	.86	Coil & Whip
CS147M	144-174	49	1.25	Magnetic
CS147T	144-174	49	1.25	Trunk Lip
CS147	144-174	49	1.25	3/4" Hole
CS147A	144-174	49	1.25	Coil & Whip
CS1147M	144-148	20	.5	Magnetic
CS220M	222-225	33	.84	Magnetic
CS220T	222-225	33	.84	Trunk Lip
CS220	222-225	33	.84	3/4" Hole
CS450M	435-470	29.5	.75	Magnetic
CS450T	435-470	29.5	.75	Trunk Lip
CS450	435-470	29.5	.75	3/4" Hole
CS1450M	430-450	7	.17	Magnetic
CS50M	46-54	49	1.25	Magnetic
CS50T	46-54	49	1.25	Trunk Lip
CS50	46-54	49	1.25	3/4" Hole
CS28M	28-30	49	1.25	Magnetic
CSMG	90 lb pull mag mount, PL259 & 12 ft UltraLink Cable®			
CSMGN	90 lb pull mag mount, N-conn & 12 ft UltraLink Cable®			



70 CM, 1 1/4, 2, 6, 10 Meters



## Ringo Ranger

### NEW ARX-6

The ARX-6 was developed to meet the needs of serious 6 meter FM hams. It has twice the gain of the standard AR-6. If your operating style requires the most gain and wide-area coverage from a repeater or home station, the ARX-6 is made for you.

### ARX-2

This is the 2 meter antenna that combines good gain with compact size. If space does not allow extra height or decoupling radials, the ARX-2 will do the job.

MODEL	ARX-6	ARX-2
Frequency, MHz	50-54	135-160
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>4	>6
Gain, dB	5.5	5.5
Pwr Rating, Watts FM	1000	1000
Radiation Angle, Deg.	16	16
Horizontal Radiation		
Pattern, Degrees	360	360
Ring Diameter, in (cm)	13 (33)	5 (12.7)
Base Dia, in (cm)	2 (5.1)	1.5 (3.8)
Height, ft (m)	24 (7.3)	9.3 (2.8)
Mast Range, in (cm)	1.5-1.75 (3.8-4.4)	1-1.25 (2.54-3.2)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.9 (.18)	.33 (.03)
Weight, lb (kg)	7.5 (3.4)	4 (1.8)

## Ringo

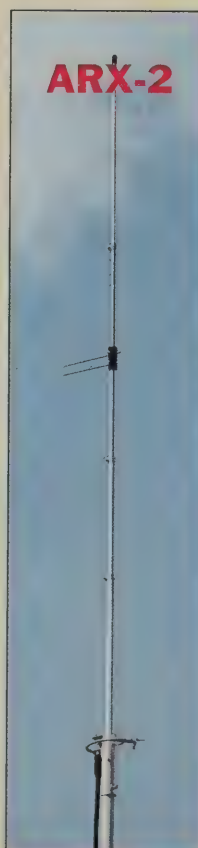
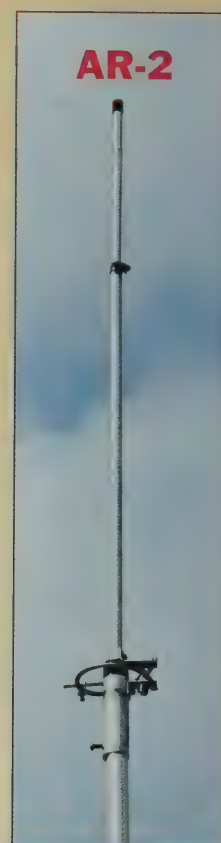
These are the original W1BX FM Ringos. If you want a combination of compact size, wide bandwidth, a low radiation angle, these economical antennas are just for you. Since radials are not needed, you can even use our Ringos indoors. Our Ringos are 1/2 wave and include built-in lightning protection. Put up one of these easily installed antennas and start enjoying FM!

MODEL	AR-2	AR-6	AR-10	AR-220	AR-450
Frequency, MHz	135-160	50-54	28-29.7	222-225	440-460
SWR 1.2:1 Typical					
2:1 Bandwidth, MHz	10	2	>1.5	10	20
Gain, dB	3.75	3.75	3.75	3.75	3.75
Power Rating, Watts FM	1000	1000	1000	500	500
Radiation Angle, Deg.	16	16	16	16	16
Horizontal Radiation					
Pattern, Degrees	360	360	360	360	360
Ring Diameter, in (cm)	5 (12.7)	13 (33)	13 (33)	5 (12.7)	3.5 (8.9)
Radiator Base Dia, in (cm)	.75 (1.9)	1 (2.5)	1 (2.5)	.75 (1.9)	.5 (1.3)
Height, ft (m)	3.9 (1.2)	10.1 (3.1)	17.6 (5.36)	2.6 (.78)	1.4 (.43)
Mast Size Range, in (cm)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	1-1.25 (2.54-3.1)	.75-.88 (1.9-2.22)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	.21 (.02)	.37 (.03)	1.68 (.16)	.21 (.02)	.1 (.01)
Weight, lb (kg)	1.5 (.68)	2.5 (1.1)	4 (1.8)	1.2 (.55)	1 (.45)

## Four Pole Arrays

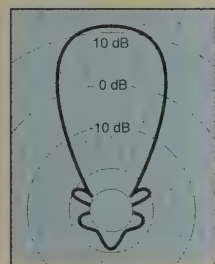
Cushcraft's four 1/2 wave dipole array is perfect for your repeater or as a powerful base antenna. Strong through-the-boom dipole mounting ensures long life and superior electrical characteristics. The dipoles mount to your tower's legs or on a separate support mast (not included). They can be arranged for omni or elliptical patterns.

MODEL	AFM-4DA	AFM-24DA	AFM-44DA
Frequency, MHz	144-148	222-225	435-450
Gain, dBd	9 Offset 6 Omni	9 Offset 6 Omni	9 Offset 6 Omni
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>4	>5	>15
Power Rating, Watts FM	500	500	250
Radiation Angle Degrees	6	6	6
Horizontal Radiation			
Pattern, Degrees	360-Variable	360-Variable	360-Variable
Height, ft (m)	23 (7.0)	15 (4.5)	5 (2.4)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.1)	1.5-2.0 (3.8-5.1)	1.25-2.0 (3.2-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	2.54 (.24)	1.85 (.17)	1.13 (.11)
Weight, lb (kg)	7 (3.2)	6 (2.7)	5 (2.3)

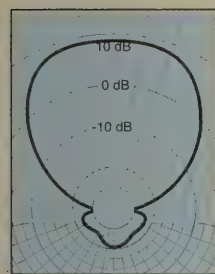




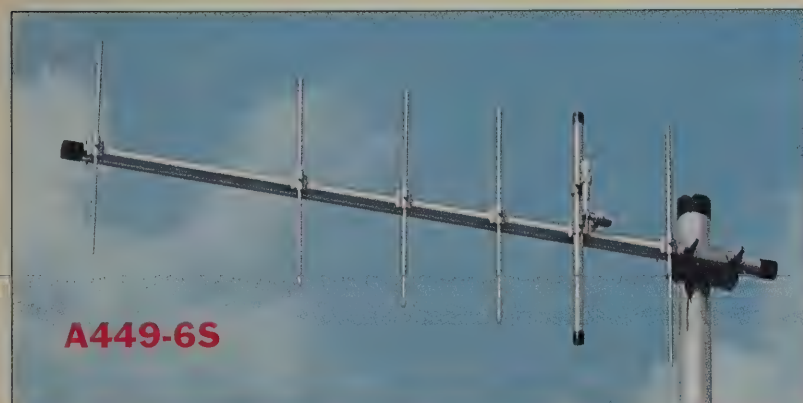
## 70 CM, 2 Meters



A148-10S



A148-3S



### Performance and Value Leaders

A148-10S and A148-3S are the newest computer optimized models of our 2 meter Yagis. We have improved both the pattern and gain of these antennas to give you better FM coverage. They have direct 50 Ohm Reddi-Match with SO239 connector and stainless steel hardware.

A148-3S is the low priced quality leader for Packet, FM or even portable use. It is easily rear mounted.

A148-10S is one of our best value designs with excellent gain and front-to-back ratio. Use it for long range FM or full band 2 meter operation.

For even higher gain the all new A148-20S is a complete antenna array with two ten element Yagis, stacking frame, harness and stainless steel hardware.

Model	A148-3S	A148-10S	A148-20S
Frequency, MHz	144-148	144-148	144-148
No. Elements	3	10	20
Forward Gain, dBd	7.8	13.2	16.2
Front to Back Ratio, dB	25	24	24
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>5	≥4	≥4
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	66	40	20
H Plane	108	46	46
Boom Length, ft (meters)	2.8 (.85)	12(3.6)	12 (3.6)
Longest Element, in (cm)	41 (104.1)	40.3 (102.4)	40.3 (102.4)
Turning Radius, ft (m)	2.8 (.8)	6 (1.8)	6.6 (2.0)
Mast Size Range, in (cm)	1.25-2.0 (3.2-5.1)	1.25-2.0 (3.2-5.1)	1.25-2.0 (3.2-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	0.27 (0.02)	1.21 (0.11)	2.82 (0.26)
Weight, lb (kg)	1.5 (0.7)	6 (2.7)	15 (6.8)

MODEL	A449-6S	A449-11S
Frequency, MHz	440-450	440-450
No. Elements	6	11
Forward Gain, dBd	10.5	13.2
Front to Back Ratio, dB	18	20
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	>10	>10
Power Rating, Watts PEP	350	350
3dB Beamwidth, Degrees		
E Plane	60	48
Boom Length, ft (m)	2.9 (0.89)	4.2 (1.35)
Longest Element, in (cm)	13 (33)	13 (33)
Turning Radius, ft (m)	2.9 (.89)	2.8 (.85)
Mast Size Range, in (cm)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.2-3.8)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	0.30 (0.03)	0.39 (0.04)
Weight, lb (kg)	3 (1.4)	4 (1.8)

### Stacking Kits

Our VPK stacking kits for the antennas above are supplied complete with mounting boom, harness, and hardware.

Antenna	Frequency MHz	Complete Kit	Harness Only
A148-3S	144.5-148	A14-VPKS	A14-SK
A148-10S	144.5-148	A148-VPKS	A148-SK
A449-6S	440-450		A449-SK
A449-11S	440-450	A449-VPKS	A449-SK



## 70 CM, 2 Meters



Reliable satellite communications will be yours with the new Cushcraft OSCAR antennas. The new 22XB two meter and 738XB 70 cm circularly polarized Boomer antennas offer the flexibility you need. Buy them both to create the best station possible or use a single antenna to upgrade an existing installation. Cushcraft provides polarization switches with both antennas. There are no additional options needed. Each antenna includes complete instructions on the mounting and installation of your OSCAR antenna system.

### NEW 22XB 2M OSCAR

Stronger signals will link your station with the satellite of your choice. Cushcraft's new 22XB OSCAR Boomer gives you the excellent performance that hams around the world have experienced with the Boomer antenna series. Clean patterns, 14 dBdc gain, superb circularity, and rugged construction are all part of the package. The polarity relay to switch from right to left circular polarization is included. These new designs are resistant to changes brought about by the weather. Construction of the 22XB features all stainless steel hardware. The boom is an extra rugged 1-1/2" diameter 6063-T832 aluminum alloy. Aim your new 22XB at the satellite and you'll be enjoying OSCAR at its best.

### NEW 738XB 70 CM OSCAR

Computer aided design and superior engineering are combined to make 738XB the finest 70 CM OSCAR antenna available. The longer boom means more gain. Thirty-eight optimally spaced elements on a rugged 14.3 foot boom mean 15.5 dBdc of gain for your station. Easily overcome the QRM and be on your way to more successful QSO's. Excellent ellipticity means that as the satellite rotates your signals will stay steady. Cushcraft's 738XB features a built-in polarity switcher. All stainless steel hardware, the rugged 6063-T832 aluminum boom, and the weather-sealed polarity switch all add up to the best choice for the serious OSCAR operator. Assemble a winning station by choosing Cushcraft satellite antennas.



MODEL	22XB	738XB
Frequency, MHz	144-148	432-438
No. Elements	22	38
Forward Gain, dBdc	14	15.5
Front to Back Ratio, dB	25	25
Ellipticity dB at boresight	2	2
SWR 1.2:1 Typical		
2:1 Bandwidth, MHz	4	6
Power Rating, Watts PEP	600	250
3dB Beamwidth, Degrees		
E Plane	30	24
Boom Length, ft (m)	19.33 (5.9)	14.33 (4.37)
Longest Element, in (cm)	39.19 (99.6)	13.94 (35.4)
Turning Radius, ft (m)	11 (3.35)	8.5 (2.6)
Mast Size Range, in (cm)	1.5-2.0 (3.8-5.0)	1.5-2.0 (3.8-5.0)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	2.6 (.24)	1.4 (.13)
Weight, lb (kg)	11 (5)	7.6 (3.5)
Polarity switch	Included	Included

### NEW A148-20T 2 Meter Hi-Lo Cross Yagi

Here's the antenna that solves multi-mode problems! Ten vertically polarized and ten horizontally polarized elements provide 11.1 dBd gain covering 144-148 MHz. The horizontal elements handle your CW and SSB needs, while the vertical elements cover FM. Hardware is stainless steel.

A148-20T has a boom length of 11 ft. (3.4m), longest element length of 40.6 in. (103cm), wind area of 1.21 ft<sup>2</sup> (.11m<sup>2</sup>), and a mast size of 1.25-2 in. (3.2-5.1 cm).



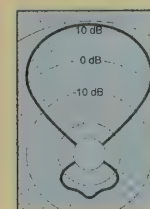


## 70 CM, 2, 6 Meters

### 6 Meters

Computer-aided modeling and test range techniques were used by Cushcraft engineers to further optimize the performance of our popular 6 meter Yagis. This process means more gain and cleaner patterns with excellent front-to-back ratios. S-models have very broad bandwidth so they will not detune in bad weather. They feature stainless steel hardware for long trouble-free life. Enjoy the new popularity and exciting contacts on the 6 meter band with one of the S-series Cushcraft Yagis.

MODEL	A50-3S	A50-5S	A50-6S
Frequency, MHz	50-54	50-54	50-54
No. Elements	3	5	6
Forward Gain, dBd	8	10.5	11.6
Front to Back Ratio, dB	20	24	26
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>1	>1	>1
Power Rating, Watts PEP	1000	1000	1000
3dB Beamwidth, Degrees			
E Plane	76	56	48
Boom Length, ft (m)	6 (1.8)	12 (3.7)	20 (6.1)
Longest Element, in (cm)	117 (300)	123 (312)	119 (302)
Turning Radius, ft (m)	6 (1.8)	7.8 (2.37)	11.5 (3.5)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)	1.5-2 (3.8-5.1)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	1.80 (0.17)	2.9 (0.273)	4.46 (.41)
Weight, lb (kg)	7 (3.2)	11 (5.0)	18 (8.2)



A50-6S  
RADIATION  
PATTERN

### 70 CM / 2 Meters

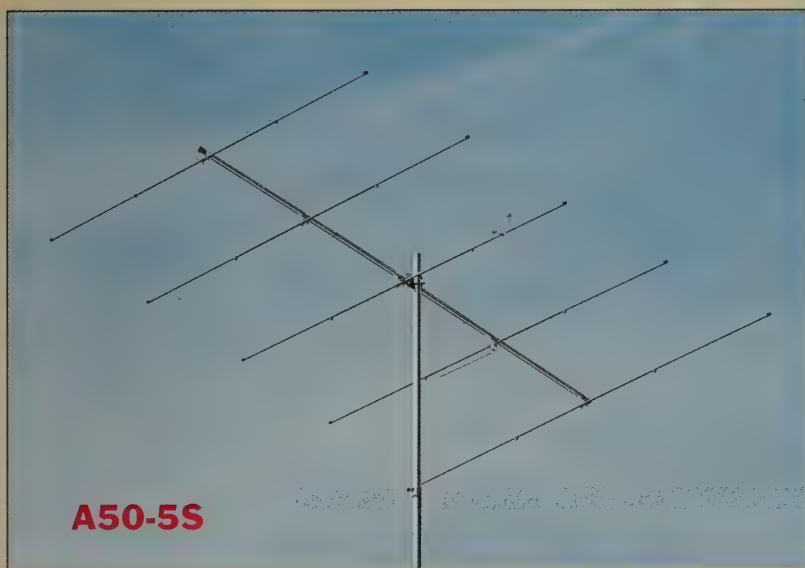
A148-10S is the latest generation of our incredible 2 meter Yagis. With its computer optimized design it has outstanding gain and pattern. This antenna is for SSB, CW, tropo or any mode. It has all stainless steel hardware and SO-239 connector. Assembly is quick with easy-to-follow instructions.

For 70 cm, the always popular A430-11S has been re-designed with all stainless steel hardware.

MODEL	A144-7S	A148-10S	A430-11S
Frequency	144-146	144-148	430-435
No. Elements	7	10	11
Forward Gain, dBd	11.1	13.2	13.2
Front to Back Ratio, dB	20	24	20
SWR 1.2:1 Typical			
2:1 Bandwidth, MHz	>3	≥4	>10
Power, Watts PEP	1000	1000	350
3dB Beamwidth, Deg.			
E Plane	46	40	38
H Plane		46	
Boom Length, ft (m)	8.2 (2.5)	12 (3.6)	4.7 (1.40)
Longest Element, in (cm)	40 (101.6)	40.3 (102.4)	14 (35.5)
Turning Radius, ft (m)	4.9 (1.5)	6 (1.8)	2.6 (.81)
Mast Size Range, in (cm)	1.5-2 (3.8-5.1)	1.25-2.0 (3.2-5.1)	1.25-1.5 (3.1-3.8)
Wind Load, ft <sup>2</sup> (m <sup>2</sup> )	0.81 (0.08)	1.21 (0.11)	0.42 (.04)
Weight, lb (kg)	4 (1.8)	6 (2.7)	3 (1.4)



A50-6S



A50-5S



A148-10S



### Fast Acting Gas Discharge Lightning Arresters

Protect your valuable equipment from surges of up to 5,000 amperes with a Cushcraft constant impedance LAC4 arrester! The LAC4 has a replaceable gas discharge tube which clamps voltage surges to less than 50 volts in about 100 nanoseconds—much quicker than the voltage rise time of lightning.

You cannot afford to be without lightning protection. One of the models below is right for your shack.

- LAC4 200 Watt with UHF SO-239 connectors
- LAC4H 2 kW with UHF SO-239 connectors
- LAC4N 200 Watt with N connectors
- LAC4NH 2 kW with N connectors
- LC2 200 Watt replacement cartridge
- LC2KW 2 kW replacement cartridge

### Blitz Bug Lightning Arresters

Cushcraft also recommends this well-known series of arresters which are based on a patented three point static discharge design. The Blitz Bug has a sealed air chamber, constant static drain, and controlled voltage discharge.

The Blitz Bug is rated at 2 kw PEP to 500 MHz with negligible insertion loss.

- LAC-1 —with UHF PL-259 and SO-239 connectors
- LAC-2 with UHF SO-239 connectors

### Power Dividers For Boomers

Our power dividers make it a snap to stack Cushcraft Boomers. Models for 17B2 have N-connectors. They are available for these antennas:

- PD-2 for two 13B2, 124WB
- PD-2N for two 17B2
- PD-4 for four 13B2
- PD-4N for four 17B2
- PD-222 for two 220B, 224WB or 225WB
- PD-224 for four 220B, 224WB or 225WB

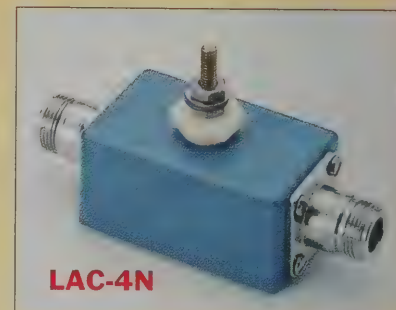
### Stacking Harnesses For Boomers

For even easier installation of our Boomers, use our installation kits that are complete with harness and power divider. Models for 17B2 have N-connectors.

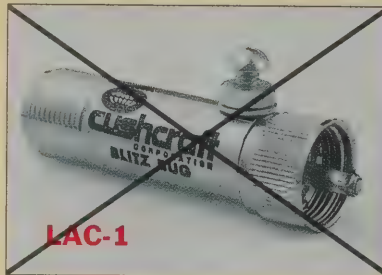
- 617-SK for two 617-6B's
- 22-SK for two 13B2's
- 22N-SK for two 17B2's



**LAC-4H**



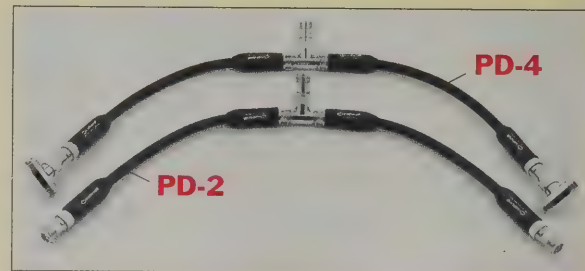
**LAC-4N**



**LAC-1**



**LAC-2**



**PD-2**

**PD-4**

One year warranty backed by our 40 years of antenna experience.

Cushcraft antennas are designed to survive 80 mph (129 kph) winds.

For safe antenna installations, avoid contact with powerlines.

The use of lightning arresters is highly recommended.

Stainless steel hardware and high grade seamless 6063-T832 tubing used in all antennas.

Support mast, feedline and RF chokes are not included with antennas.

Specifications are subject to change without notice.

All Cushcraft antennas are available through dealers worldwide.

## BOOMER STACKING INFORMATION

Antenna	2x617-6B	2x13B2	4x13B2	2x220B	4x220B	2x424B	4x424B	2x17B2	4x17B2
Forward Gain, dBd	17.0	18.8	21.8	19.8	22.4	20.8	23.4	21.0	24.0
Front/Back Ratio	30	24	24	30	30	30	30	24	24
E-Plane Beamwidth, deg	2x17.5	2x18	2x9	2x13	2x6.5	2x9.5	2x4.8	2x14.5	2x7.3
H-Plane Beamwidth, deg	2x10	2x9.5	2x9.5	2x7	2x5.5	2x5.5		2x7.5	2x7.5
Vert, ft	26	9.2	9.2	8	8	5	5	11.5	11.5
(m)	7.92	2.8	2.8	2.44	2.44	1.97	1.97	3.5	3.5
Horiz, ft	-	-	9.6	-	8.5	-	5.5	-	12
(m)	-	-	3.0	-	2.59	-	2.16	-	3.7
Approximate Wt, lb	62	22	44	23	76	15	55	32.5	115
(kg)	28.12	10.00	20.00	10.40	34.40	7.62	24.95	14.8	52.3

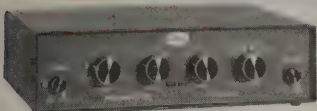




## ACCESSORIES BOOKS CODE COURSES

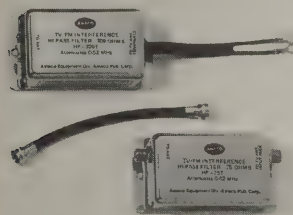
### PT-3 Preamplifier

Covers 160 thru 6 meters, useable with either a receiver or transceiver. Tunable low noise dual gate FET circuit provides more than 20dB gain with low noise figure and improved spurious and image rejection. RF sensed switch with variable delay automatically bypasses to the antenna on transmit. Second receiver and antenna capability. 12V DC. use P-12T (\$9<sup>95</sup>) 2 1/2" h x 8 3/4" w x 6 1/2" d .... **\$124<sup>95</sup>**



### TPA Tunable Preamplifier & Active Antenna

Use as a preamplifier to improve the gain of a receiver, or as an indoor active antenna. Covers 0.22 to 30MHz in 5 bands. A dual-gate FET device provides an excellent noise figure and over 20 dB gain. As a preamplifier, the input matches most antennas; long wire, 300Ω and random lengths. When no external antenna is available, the preamplifier's built-in 30" collapsible whip gives excellent results. Uses 9V battery or PT-9T AC adapter (\$9<sup>50</sup>). 1 1/2" h x 8" w x 6 1/2" d ..... **\$76<sup>95</sup>**



**High Pass Filters** stop TV, FM and VCR interference caused by harmonics or overload from HF amateur radio transmissions, etc. Installs at TV or VCR antenna terminal.

or connector. Sharp frequency cutoff at 52MHz with 70dB attenuation below 50MHz. Models for 75Ω or 300Ω TV antenna lead-ins or 75Ω cable systems. **HP-300T (300Ω) • HP-75T (75Ω) ...ea. \$12<sup>95</sup>**

**OCM-2 Combination  
Code Practice Oscillator  
& CW Monitor**  
Volume control, 3" speaker, and headphone terminals. Requires a code key and a 9V battery.

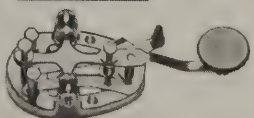
**Kit \$19<sup>95</sup> • Wired \$24<sup>95</sup>**



**K-1** Low-cost general purpose key with phenolic base, adjustable tension and contact spacing. .... **\$10<sup>95</sup>**



**K-4** Deluxe high quality key. Polished brass base, shorting bar. .... **\$16<sup>95</sup>**

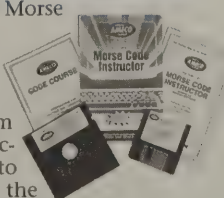


### FCC Test Manuals

New revised editions Incorporating all of the latest changes in the FCC amateur radio test preparation requirements. Separate manuals are available for all license classes including the No-Code Technician. All current FCC examination questions for each class, with corresponding multiple choice answers.

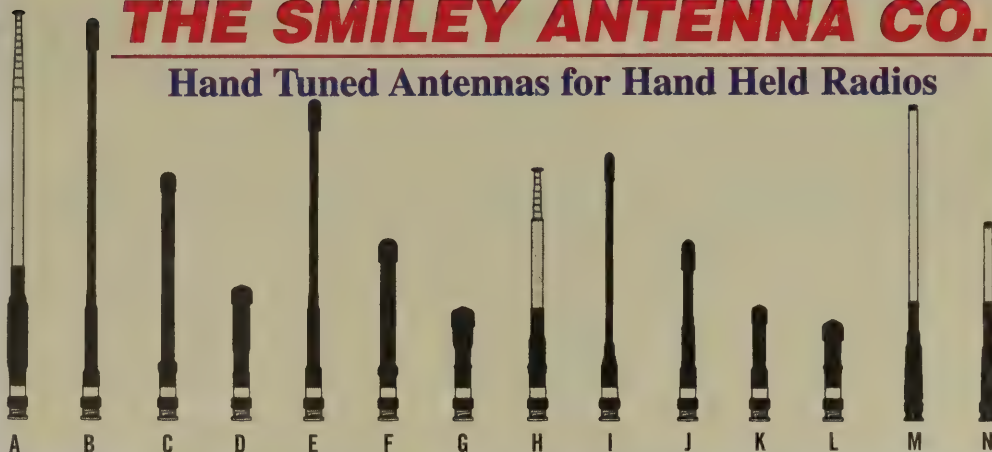
**More AMECO products... see Price List & Index**

**107-PC-2** The complete Morse Code Instructor for IBM PC/XT/AT or compatible. Menu driven-over 18 options, on-line "help" screens. Generates random characters, numbers, punctuation & QSO's. Similar to FCC/VEC exams Ideal for the beginner ..... **\$29<sup>95</sup>**



# THE SMILEY ANTENNA CO.

## Hand Tuned Antennas for Hand Held Radios



Each Smiley handheld antenna is individually hand tuned to resonance at band center under normal operating conditions. (No ground plane - No radials). Manufactured from the finest heat-treated copper plated spring steel coils. Cold rubber compound is used for coil insulation and a neoprene heat-shrink coating applied for strength and endurance. All have BNC connectors.

**THIN STICK** 1/4 wave telescoping dual band antenna for 144 and 220MHz bands ..... (TS) **\$16<sup>95</sup>**

**SUPER STICK II (A)** 2 meter, 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain fully extended (54"); usable fully collapsed, or one section 1/4 wave. Length: 54" extended, 10" collapsed ..... (SS-II) **\$19<sup>95</sup>**

**SUPER STICK II COMBO** As above but includes a 2 meter Stubby Duck antenna (D) ..... (SS-II/COMBO) **\$26<sup>95</sup>**

**5/8 SLIM DUCK (B)** 2-meter, 5/8-wave, 7db gain, flexible base loaded antenna. 12" long ..... (5/8 SLD-2) **\$17<sup>95</sup>**

**5/8 SLIM DUCK COMBO** As above, but includes a 2 meter Stubby Duck antenna (D) ..... (5/8 SLD-2 COMBO) **\$24<sup>95</sup>**

**REGULAR DUCK (C)** For 2 meters. Tuned Ducks show a 3db gain over other Rubber Ducks because they are impedance matched for hand-helds. .... (RD-2) **\$14<sup>95</sup>**

**STUBBY DUCK (D)** Tuned, efficient, for 2M .. (RDS-2) **\$14<sup>95</sup>**

**SUPER STICK III** 220MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed, or a one section 1/4 wave. 36" extended, 8 3/4" collapsed. (SS-III) **\$19<sup>95</sup>**

**SUPER STICK III/COMBO** As above but includes a 220MHz Stubby Duck antenna (G) ..... (SS-III/COMBO) **\$26<sup>95</sup>**

**5/8 SLIM DUCK (E)** 220MHz, 7db gain, flexible base loaded antenna. Length: 9" ..... (5/8 SLD-220) **\$17<sup>95</sup>**

**5/8 SLIM DUCK COMBO** As above, but includes a 220MHz Stubby Duck (G) ..... (5/8 SLD-220 COMBO) **\$24<sup>95</sup>**

**REGULAR DUCK (F)** Tuned for 220MHz ..... (RD-220) **\$14<sup>95</sup>**

**STUBBY DUCK (G)** Tuned for 220MHz ..... (RDS-220) **\$14<sup>95</sup>**

**SUPER STICK IV (H)** 440MHz 5/8-wave, flexible base loaded telescoping antenna. 6-9db gain extended; usable collapsed. 18" extended, 5 3/4" collapsed ..... (SS-IV) **\$19<sup>95</sup>**

**SUPER STICK IV COMBO** As above, but includes a 440MHz Stubby Duck (K) ..... (SS-IV/COMBO) **\$26<sup>95</sup>**

**SLIMLINE (I)** 440MHz, 1/4-wave flexible ant .. (SL-440) **\$12<sup>95</sup>**

**5/8 SLIM DUCK (J)** 440MHz, 7db gain, flexible base loaded antenna. Length: 5" ..... (5/8 SLD-440) **\$17<sup>95</sup>**

**5/8 SLIM DUCK COMBO** As above, but includes a 440MHz Stubby Duck (K) ..... (5/8 SLD-440 COMBO) **\$24<sup>95</sup>**

**STUBBY DUCK (K)** Tuned for 440MHz ..... (RDS-440) **\$14<sup>95</sup>**

**MINI DUCK (L)** Tuned for 440MHz ..... (RDMD-440) **\$14<sup>95</sup>**

**FLEX-COIL (M)** 2 meter, 1/2-wave, 7-9 dB gain, flexible base 35" fully extended ..... (FLX 1/2 WAV2M) **\$25<sup>95</sup>**

**270A (N)** Telescoping 2m/440 gain antenna. 1/4-wave (2m) 5/8-wave (440 MHz) ..... **\$19<sup>95</sup>**

**TAQ** 1/4-wave whip, specify 2M, 220 or 440MHz ..... **\$10<sup>95</sup>**

*There's a Smiley for your every need!*



## Arrow Antenna

Pictured is Chuck Duey, KI0AG, working the AO27 Amateur Radio Satellite using his Yaesu FT-530 Dual Band HT connected to an Arrow 146/437-10 antenna.

The FT-530 was operated in full duplex mode using the up-link frequency of 145.850 MHz and the 436.800 MHz down-link. The headphones allowed him to monitor the down-link at all times, even while transmitting.

The Arrow is designed specifically to allow portable Satellite operation using just an HT. This means engineering it to provide maximum gain and efficiency in the smallest practical size and weight.

The boom is constructed out of 3/4" square aluminum stock, 37 1/2" long with a big foam grip on the back end for easy holding. The three VHF and seven UHF Gamma Matched elements with separate BNC connectors are regular aluminum arrow shafts which are traditionally strong and lightweight. Each element is plastic tipped for safety.

**Arrow 146/437-10 - \$73<sup>95</sup>**





## Broadband Folded Dipoles

- ✓ Unique Patented Design
- ✓ True Continuous Coverage
- ✓ 1.8 - 30 Mhz in Only 90

Feet


- ✓ Low Noise

- SWR less than 2:1 from 1.8 - 30 Mhz
- No antenna tuner required
- 2 KW PEP SSB/CW ICAS
- #14 stranded copperweld wire (stainless steel available)
- 50 Ohm input with SO-239

See B&W in  
the Price List



BWD-1.8-30 -----Copperweld Wire  
BWDS-1.8-30-----Stainless Steel Wire

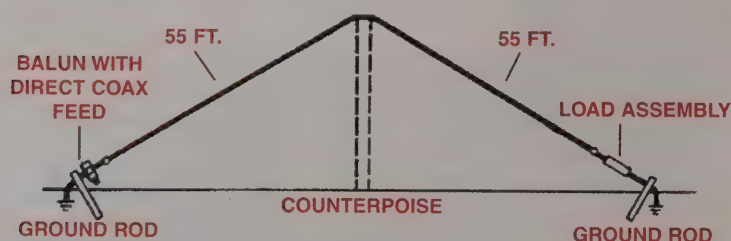


**300 WATT PORTABLE ANTENNA FOR 2-40 METERS and CB**

**AP-10** Designed especially for renters, travelers and city dwellers. Stainless steel whip (51"), insulated counterpoise wire, aluminum bracket/clamp, and 10 ft. of coax. Included set of loading coils for 40, 30, 20 (also used for 18), 15 and 10 meters. No coils needed for 6 or 2 meters. Also useful as an emergency antenna. Don't be off the air! Shipping weight 3 lbs.

## End-Fed Vee – 1.8 - 30 Mhz

All of the same unique broadband characteristics of our folded dipole antennas, except in a different configuration. Weight 7 lbs.



AC-1.8-30-----Copperweld Wire  
ACS-1.8-30-----Stainless Steel Wire

## Trap Dipole Antennas

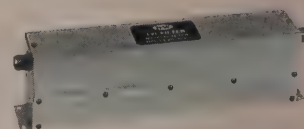
In selecting an antenna, choose the longest one that will fit your property. It will cost less and have wider bandwidths. All Barker & Williamson dipoles are made from rugged #14 stranded copperweld wire for strength and conductivity. Unless otherwise noted, all antennas will handle 1KW PEP, 500 Watts output. These dipoles may be installed as inverted "Vees" or horizontally.

### SELECTION TABLE

Length	Bands	Description	Model	Shpg Weight
137 Ft 41.75 M	160 80 40 20	Low SWR on all bands. Three sets of traps isolate a full half wave on each band for superior performance.	AS-160	8 lbs 3.65 Kg
110 Ft 33.5 M	80 40 20 15 10	Low SWR on 80 and 40 meter bands, somewhat higher SWR on 20, 15 and 10 meters. Utilizes one set of traps.	AT-110	5 lbs 2.25 Kg
96 Ft 29.25 M	160 30	2 KW PEP. This antenna has one set of loading coils to allow 160 meters in very limited space.	AXS-160	6 lbs 2.72 Kg
78 Ft 23.75 M	80 40 20	Two sets of traps give low SWR on all bands. Excellent 80 meter coverage.	AS-80	6 lbs 2.72 Kg
65 Ft 19.8 M	80 40 15	A combination of one set of loading coils and one set of traps allows 80 meters in very limited space.	AXS-80	6 lbs 2.72 Kg
55 Ft 16.75 M	40 20 15 10	Four bands in only 55 ft. One set of traps gives efficient operation.	AT-55	5 lbs 2.25 Kg
40 Ft 12.2 M	40 20 15 10	Utilizing three sets of traps, this antenna has low SWR on all bands.	AS-40	7 lbs 3.18 Kg
20 Ft 6.1 M	20 15 10	For very light spots, two sets of traps yield low SWR on all three bands.	AS-20	6 lbs 2.72 Kg

## Low Pass TVI Filter

**FL10/1500** 1500 Watts, for use at 1.8-30 Mhz. Insertion loss less than 0.5 dB. Cut-off frequency 34 Mhz. Max. atten. at 52 MHz. Min atten 70 dB. With SO-239 connectors. Shipping weight 2 lbs.



## HEAVY DUTY COAXIAL SWITCHES FOR 2KW PEP CERAMIC SWITCHES WITH COIN SILVER CONTACTS

**CS-6G** Single Pole, 6 Positions. All unused positions grounded. SO-239 UHF connections. Shipping wt. 2lbs.



**CSR-5G** Single Pole, 5 Position. All unused positions grounded. Sixth position grounds all inputs for lightning protection. SO-239 UHF connections. Desk, wall, panel mount. Shipping wt. 2lbs.




Quality Communications Products Since 1932 — All Products Proudly Made in the USA



# Vertically Speaking THE BEST!

VERSATILE  
MULTIBAND  
VERTICAL  
ANTENNAS

- HF2V  TRAP FREE
- HF6V
- HF9V

Offering 2, 6 and 9 Band Verticals with optional 160 Meters. Butternut's unique, patented design solves traditional problems that are associated with vertical antennas. Many verticals rely on lossy traps to offer multiband performance - which causes narrowed bandwidth. The Butternut trap-free design offers superior bandwidth and much greater radiation efficiency.

## SPECIFICATIONS

### Frequency:

- HF2V • 40 & 80M
- HF6V • 10, 15, 20, 30, 40 & 80M
- HF9V • 6, 10, 12, 15, 17, 20, 30, 40 & 80M (Opt. 160M kit avail.)

Height: 26 ft. HF6V/HF9V  
32 ft. HF2V

### VSWR @

Resonance: 1.5:1 or less on all bands



Call or write for our Free New Color Brochure!  
(Ask for the designers Dirty Little Secrets!)


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e-mail: bencher@bencher.com

A SUBSIDIARY OF  **BENCHER, INC.**

## BUTTERNUT HF5B BUTTERFLY BEAM

## A N T E N N A

If you hunger for a directional antenna, but can't put up a full-size Yagi...

### WE'VE GOT THE ANSWER!

Designed for the amateur with limited space, it offers significant improvement over omnidirectional antennas. Light enough to turn easily with a standard TV antenna rotator, it mounts easily on a mast or roof tripod.



TRAP  
FREE



Wingspan: 12 ft. 6 in. (3.8m)

Boom Length: 6 ft. (1.8m)

Turning Radius: 6 ft. 11 in (2.1m)

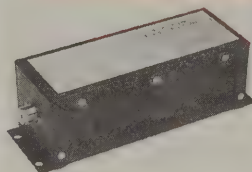
Vertical Spreaders: 6 ft. (1.8m)

VSWR @ Resonance: 1.5:1 or less on all bands

Frequency: 10, 12, 15, 17 & 20M

Minimum Height: 30 ft (9.1m)

## OAK BAY TECHNOLOGIES



### LP-11P Commercial

### Grade Low Pass Filter

Installs in the transmission line between transmitter and power amplifier or tuner. Eliminates TVI by filtering out transmitter generated harmonics that could fall within

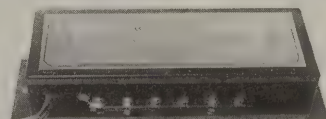
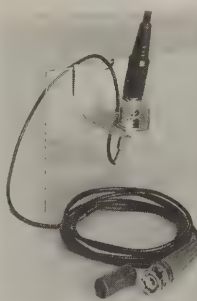
the TV bands. Eleven pole Chebyshev filter design covers 1.8 thru 30MHz with less than 0.5dB insertion loss, an upper cutoff frequency of 41MHz and 80dB of ultimate attenuation. Rated at 1 KW RF

LP-50 Low Pass Filter for 1.8 thru 54MHz \$69<sup>95</sup>

### AM-101B Rubber

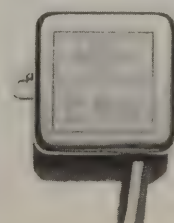
### Duck Window Mount

Improves handheld performance when operating mobile by getting the RF out of the car. Great for emergencies, rental cars, etc. The stainless steel bracket slips on the top edge of car window, and the rubber duck antenna from your HT attaches to the BNC mount on the outside. Comes with 6 ft. of RG-174U coax with BNC connector. 15W. \$24<sup>95</sup>



### PS-612M High Current 12V Power Strip

Make just one connection to your power source (battery, power supply, etc.) and distribute power to multiple devices. Perfect for HF radios or other high current equipment. Provides six outputs with circuit breakers; (3) rated at 30A, (3) at 20A. Rated for 50 Amps total current. Heavy duty steel housing. Comes with 4 feet of #8 gauge wire and lugs \$64<sup>95</sup>



### BS-25 Automatic Battery Saver Module

Stops radio equipment from draining your car battery and prevents unauthorized use. Installs between your radio and car battery. It automatically turns on power when you turn the ignition on and removes power 4 to 8 minutes after turning ignition off. Handles up to

25 Amps draw at 14.8V DC. Rugged, plated steel enclosure, 2" x 4" x 1 1/4", fused power lead. \$39<sup>95</sup>

## PERIPHEx

### REPLACEMENT BATTERIES

Spend less money for longer QSOs with power packs from Periphex!

They offer improved operating time when compared to the standard batteries that come with the radios. Replacements for most

ALINCO, ICOM, KENWOOD & YAESU

handheld radios. These Super Packs feature short circuit & overcharge protection, and a 12 mo warranty. See Periphex in the Price List



## NEW WAVE Antenna

### PORTABLE Collapsible Masts

For portable or temporary antenna installations!

These telescoping 7-section, 6063-T832 polished aircraft aluminum masts taper from 2" to 1 1/4" and are easily raised by one person at ground level in seconds. Each section joint has a 4" overlap and snaps into place. Rotates at any section along its length, or locks.

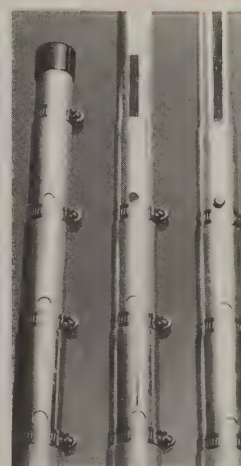
Adventurer 47" to 12 ft. .... \$109<sup>95</sup>

Traveler 19" to 19 ft. .... \$124<sup>95</sup>

Rover 71" to 26 ft. .... \$149<sup>95</sup>

Expeditioner 83" to 33 ft. .... \$174<sup>95</sup>

Explorer 95" to 40 ft. .... \$199<sup>95</sup>



### Big Foot

Park-on steel mount for supporting portable masts. Primed, ready to paint. 8 1/2 lbs. .... \$119<sup>95</sup>

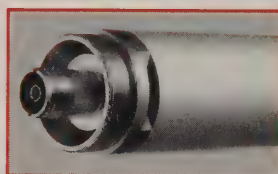




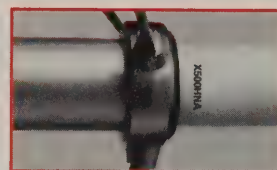
## Acclaimed as the technological leader in single & multiband antennas

- Wide-band Performance • Factory Adjusted—No Tuning Required • Highest Gain
- UPS Shippable • High Wind Rating • Fiberglass Radome • DC Grounded • Stainless Hardware

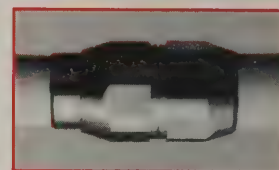
### X500HNA Ruggedized Base/Repeater Antenna



COAX CONNECTION  
AT BASE END



HEAVY DUTY BASE/  
RADIAL ASSEMBLY



STRONG JOINT  
COUPLINGS

### X50NA

The New X50NA is an excellent choice where ruggedness is required in a medium-gain, dual-band, base/repeater application.

#### Features

- Wide frequency bandwidth
- Heavy duty fiberglass radome
- Stainless steel mounting hardware and radials
- Type-N Cable connection
- Compact size for easy mounting/installation

#### Specifications:

Freq.: 2m: 144-148MHz  
70cm: 440-450MHz  
Gain: 2m: 4.5dB; 70cm: 7.2 dB  
Power: 200 watts  
Wind Rating: 135 MPH (no ice)  
Height: 5.6 feet

### X500HNA

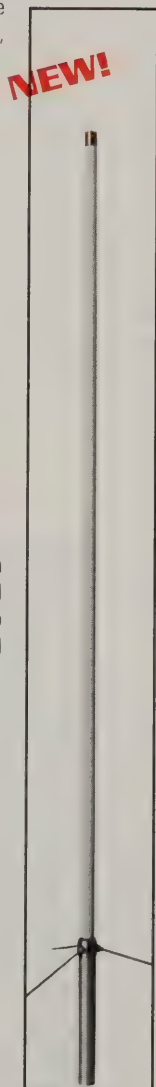
Diamond Antenna's best base station repeater antenna. Designed for strength and performance, the X500HNA is pretuned to achieve maximum gain in both the 2m and 70cm amateur bands.

#### Features

- Heavy duty fiberglass radome
- Overlapping outer shells for added strength
- Stainless steel mounting hardware and radials
- Strong-waterproof joint couplings
- Type-N Cable connection
- Wide band performance

#### Specifications:

Freq.: 2m: 144-148MHz  
70cm: 440-450MHz  
Gain: 2m: 8.3dB; 70cm: 11.7 dB  
Power: 200 watts  
Wind Rating: 90 MPH (no ice)  
Height: 17.8 feet



X50NA



X500HNA

## DIAMOND Mono-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No. Ice)
DPGH62 <sup>1</sup>	50	6.0	200	UHF	21.0	78
F22A	144	6.7	200	UHF	10.5	112
F23A	144	7.8	200	UHF	15.0	90
F142A	222	5.5	200	UHF	6.0	110
F718A <sup>2</sup>	440	11.5	250	N	15.0	90
F1230A	1240	13.5	100	N	10.5	90

## DIAMOND Dual-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No. Ice)
X50A	144/440	4.5/7.2	200	UHF	5.6	135
X50NA	144/440	4.5/7.2	200	N	5.6	135
X200A	144/440	6.0/8.0	200	UHF	8.3	112
X300A	144/440	6.5/9.0	200	UHF	10.2	112
X510NA <sup>3</sup>	144/440	8.3/11.7	200	N	17.2	90
X510MA	144/440	8.3/11.7	200	UHF	17.2	90
X500HNA	144/440	8.3/11.7	200	N	17.8	90+
X700HNA	144/440	9.3/13.0	200	N	24.0	90
X2200A	144/222	6.0/7.8	150	UHF	11.5	112
U200A	440/1240	8.3/11.7	100	N	5.9	135

## DIAMOND Tri-Band Base/Repeater Antennas

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. FT.	RATED WIND MPH (No. Ice)
U5000A	144/440/1240	4.5/8.3/11.7	100	N	5.9	135
V2000A <sup>1,4</sup>	50/144/440	2.1/6.2/8.4	150	UHF	8.3	110
X3200A <sup>5</sup>	146/222/440	6.0/7.8/8.0	100/200	UHF	10.5	112
X6000A	144/440/1240	6.5/9.0/10.0	100/60	N	10.5	112

Most requirement: 1.4"-2.4".

<sup>1</sup> Heavy duty aluminum construction. (adjustable 50-54MHz)

<sup>2</sup> F-718A: 440-450MHz., F-718J: 430-440MHz., F-718L: 420-430MHz.

<sup>3</sup> X510NJ: 144-147/430-440MHz.

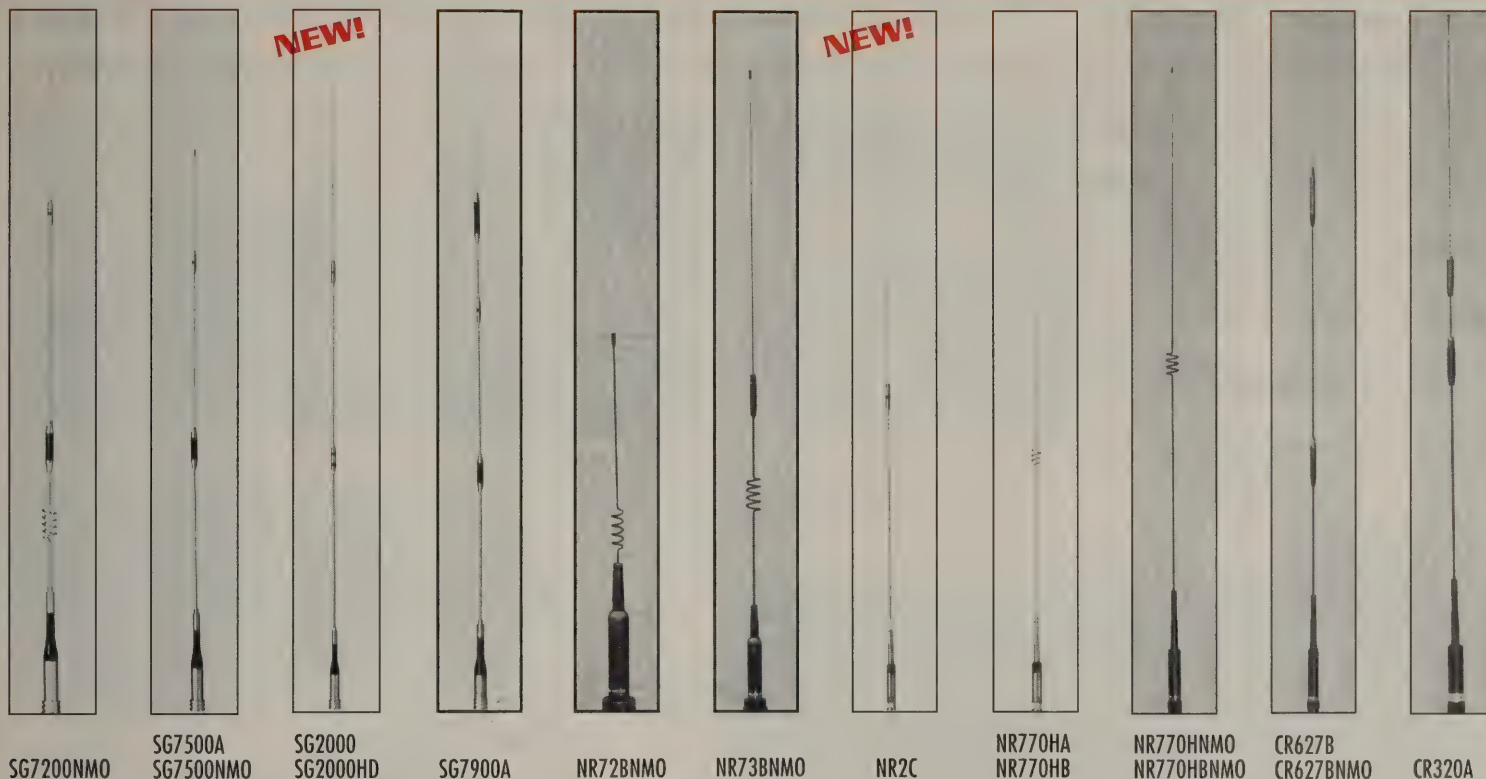
<sup>4</sup> 1/4λ rated in dBi.

<sup>5</sup> 2m: 146-148

BAND: 144=144-148MHz., 222=222-225MHz., 420=420-430MHz., 430=430-440MHz., 440=440-450MHz., 1240=1240-1300MHz.

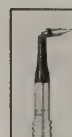


# You've seen the rest...now own the BEST!



## SPECIAL FEATURES:

- Factory pre-tuned/no adjustment
- Highest Performance antennas
- NMO and UHF (PO) base styles
- 24 Kt gold plated connector pin
- No grounding required unless noted
- Fold-over feature on most models



## FOLD-OVER

Patented One-Touch Fold-over Feature  
 (Not available on NR72BNMO, NR73BNMO,  
 & NR770SA.)

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. IN.	ELEMENT PHASING
NR72BNMO <sup>6</sup>	2m/70cm	2.15	100	NMO	13.8	1/4λ, 1/2λ
NR73BNMO	2m/70cm	2.15/5.3	100	NMO	33.5	1/2λ, 1-5/8λ
NR770SA <sup>6</sup>	2m/70cm	2.15/2.15	100	UHF	16.9	1/4λ, 1/2λ
NR770HA <sup>7</sup>	2m/70cm	3.0/5.5	200	UHF	40.2	1/2λ, 2-5/8λ
NR770HNMO <sup>8</sup>	2m/70cm	3.0/5.5	200	NMO	38.2	1/2λ, 2-5/8λ
NR770RA	2m/70cm	3.0/5.5	200	UHF	38.6	1/2λ, 2-5/8λ
NR790A <sup>*</sup>	2m/70cm	4.5/7.2	120	UHF	57.5	6/8λ, 3-5/8λ
SG7000 <sup>6</sup>	2m/70cm	2.15/3.8	100	UHF	18.5	1/4λ, 6/8λ
SG7200NMO	2m/70cm	3.2/5.7	150	NMO	36.6	1/2λ, 2-5/8λ
SG7500A	2m/70cm	3.5/6.0	150	UHF	40.6	1/2λ, 2-5/8λ
SG7500NMO	2m/70cm	3.5/6.0	150	NMO	41.0	1/2λ, 2-5/8λ
SG7900A <sup>*</sup>	2m/70cm	5.0/7.6	150	UHF	62.2	7/8λ, 3-5/8λ

1/4λ, rated in dBi.

MODEL	BAND (MHz)	GAIN (dB)	WATTS	CONN.	HT. IN.	ELEMENT PHASING
NR2C	2m	4.1	150	UHF	55.5	1/2λ+1/4λ
SG2000 <sup>*</sup>	2m	5.2	150	UHF	62.6	1/2λ+3/8λ
SG2000HD <sup>*</sup>	2m	5.2	250	UHF	62.6	1/2λ+3/8λ
SG6000NMO <sup>6,9</sup>	6m	2.1	150	NMO	39	1/4λ
NR140A	1-1/4m	3.8	100	UHF	36.2	5/8λ
NR124	23cm	8.4	100	N	25	4-5/8λ
CR214S <sup>6</sup>	2m/1-1/4m	2.15/3.4	120	UHF	37	1/2λ, 5/8λ
CR224A <sup>6</sup>	2m/1-1/4m	5.0/6.0	150	UHF	68.5	7/8λ, 2-5/8λ
CR320A <sup>6</sup>	2m/1-1/4m 70cm	2.15/3.8/ 5.5	200 100/200	UHF	37.4	1/4λ, 1/2λ 2-5/8λ
CR627B <sup>6,9</sup> CR627BNMO <sup>6,9</sup>	6m/2m/ 70cm	2.1/4.5/ 5.5	120 100/200	UHF NMO	60	1/4λ, 1/2+1/4λ/ 2-5/8λ
NR2000NA	2m/70cm 23cm	3.15/6.3/ 9.7	100	N	39	1/2λ, 2-5/8λ 5-5/8λ

<sup>\*</sup> Not recommended for Magnet Mount

<sup>6</sup> Grounding required.

<sup>7</sup> NR770HB same specifications but in black finish.

<sup>8</sup> NR770HBNMO same specifications but in black finish.

<sup>9</sup> 50 MHz antennas adjustable



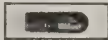

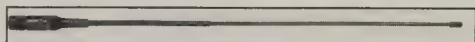

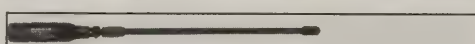

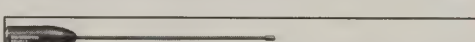
# High Efficiency HT & Scanner Antennas

## HF/VHF Multiband Mobile Antenna

### Low SWR Coax Switches & Dummy Load

#### RH Series

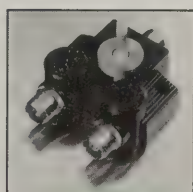
High quality, high gain HT antennas for mono, dual, and tri-band handheld radios. Available in both BNC and SMA connections. Increase the performance on your handheld or wideband scanner with a Diamond RH Series antenna.

<b>RH3</b>		<b>SRH805</b>		SMA <b>NEW!</b>
<b>RH77CA</b>				
<b>RH951S</b>				<b>NEW!</b>
<b>RH707</b>				
<b>RH205</b>				
<b>SRH519 &amp; SRH815</b>				SMA <b>NEW!</b>

MODEL	DESCRIPTION	RELATIVE GAIN
<b>D130J</b>	Wideband discone 25-1300 MHz. 200 W transmit 50-1300 MHz. No cable.	N/A
<b>RH3</b>	2m/70cm dual band "Black Bullet" HT antenna. 1.75" BNC. 120 to 900 receive.	-2 dB
<b>RH77CA</b>	High gain 2m/70cm dual band HT antenna. Receive range to 900 MHz. BNC.	+6 dB
<b>RH205</b>	2m HT antenna, telescopic, 5/8λ fully extended, 47.5"; 1/4λ retracted, 9"	+9 dB
<b>RH519</b>	2m/70cm slim dual-band HT antenna. Flexible. 8" BNC, 10 watts.	+3 dB
<b>RH707</b>	2m/70cm dual-band -tiltable whip - HT antenna. 8 1/4" BNC.	+3 dB
<b>RH951S</b>	High gain 2m/70cm/23cm slim tri-band HT antenna. Flexible. BNC (Wide band receive)	+6 dB
<b>SRH519</b>	2m/70cm dual-band HT antenna. Flexible. 8" SMA, 10 watts.	+3 dB
<b>SRH805</b>	2m/70cm/23cm tri-band HT antenna. 1.75" SMA, 10 watts.	-2 dB
<b>SRH815</b>	2m/70cm/23cm tri-band HT antenna. Flexible. 6" SMA, 10 watts.	+3dB



**DL30A**

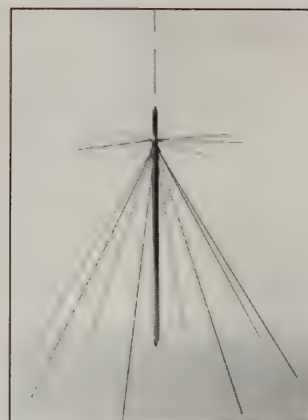


**CX210A  
CX210N**



**CX310A**

MODEL	DESCRIPTION
<b>CX210A</b>	Heavy duty wideband coax switch, DC-1000 MHz. 1.5 kW, SO-239
<b>CX210N</b>	Heavy duty wideband coax switch, DC-1500 MHz. 1.5 kW, Type N
<b>CX310A</b>	Heavy duty wideband coax switch, 3 position, DC-800MHz, SO-239
<b>DL30A</b>	Dummy load, DC-500 MHz. 15w average/100w peak. PL-259



#### D130J Super Discone Antenna

The D130J Super Discone Antenna is an ultra-wide-band antenna covering amateur radio, air traffic control and other utility bands. Rust-free stainless steel is employed in major component parts.

#### Description

- Ultra-wideband design 25 to 1300 MHz receive.
- Transmit on 2m, 1 1/4m, 70 cm, 33 cm and 23 cm amateur bands. 100-1300 MHz broad band.
- Compact and lightweight design enables the antenna to be installed on balcony railing at an apartment or condominium.
- The D130J can be made further compact and lightweight by removing the top loading coil if 25-50 MHz is not required.

#### Specification

<b>Frequency range</b>	25 to 1300 MHz receive 100 to 1300 MHz transmit
<b>Length</b>	1.7m (66.9")
<b>Weight</b>	1kg (2.2 lbs.)
<b>Max. length</b>	0.41 m (16.1)
<b>Mast diameter</b>	25 to 52mm (.098) to 2.05" with supplied mounting brackets
<b>Max. Power</b>	200 w, 100-1300 MHz



#### DIAMOND MV3A MOBILE ANTENNA SYSTEM

For the new HF/VHF transceivers.

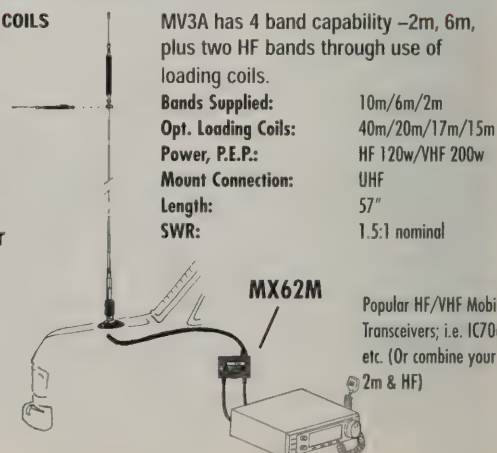
#### OPTIONAL LOADING COILS

HVC7	40m
HVC14	20m
HVC18	17m
HVC21	15m

Recommended Antenna Mounts: K400 or K600M

#### MX62M Duplexer

**Specifications:**  
 HF/6m & 2m bands  
 1.6-56 MHz LPF  
 76-470 MHz HPF  
 (76-120 receive only)  
 Watts: 600 P.E.P.  
 Loss: .2 dB LPF  
 .3 dB HPF  
 Iso.: 50 dB



MV3A has 4 band capability -2m, 6m, plus two HF bands through use of loading coils.  
**Bands Supplied:** 10m/6m/2m  
**Opt. Loading Coils:** 40m/20m/17m/15m  
**Power, P.E.P.:** HF 120w/VHF 200w  
**Mount Connection:** UHF  
**Length:** 57"  
**SWR:** 1.5:1 nominal

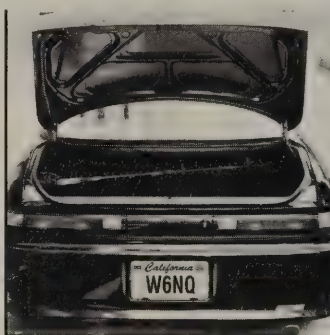
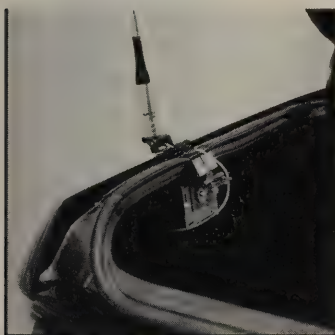
Popular HF/VHF Mobile Transceivers; i.e. IC706, etc. (Or combine your 2m & HF)



## Designed for today's high performance antennas

### DIAMOND'S Hide-away Antenna Mount

As easy as 1, 2, 3- the K601 Hide-Away Mount folds antenna safely into the trunk. Fully adjustable, fits most vehicles.



#### K601 HIDE-AWAY TRUCK MOUNT

Color: Black. Choice of NMO or UHF base.  
Recommended antennas:

NR73BNMO, NR770HNMO, NR770HA  
NR770HBNMO, NR770HB, NR770RA,  
SG7200NMO, SG7500A & SG7500NMO.

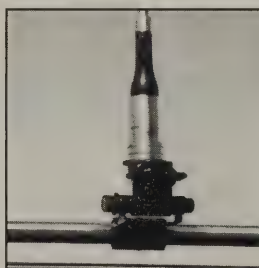
K601M-UHF Base      K601NMO-NMO Base  
C110 10' extension cable for front radio installations.



#### K600 Variable Angle Trunk Mount

Deluxe aerodynamic trunk mount.  
Vertical adjustment range 0-9%.  
Four set screw, stainless steel  
mount assembly.

K600M SO-239 base, 16.5' coax & PL-259  
K600P SO-239 base, 16.5' coax & type N



#### K550 Luggage Rack Mount

Adjustable luggage rack mount for new  
mini vans.

K550KM SO-239 base, 16.5' coax & PL-259  
K550 Mount Only



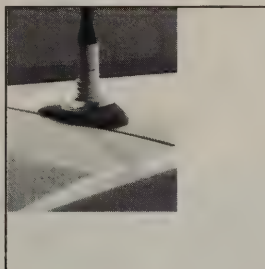
#### K702M Magnet Mount Base

Deluxe low profile magnet  
mount with high holding power.  
Aerodynamic styling, large  
6 3/8" diameter, 3/4" height.  
For VHF/UHF antennas up to 50"  
height. Includes thin mylar  
protective sheet to enhance grip  
and protection of paint.  
Cable: 13' RG58A/U & PL-259.

#### K400 Hatchback/Door Truck Lid Mount

Diamond's deluxe heavy duty mount.  
Two-axis adjustable. Recommended  
for high gain VHF/UHF antennas.

K400C\* SO-239 base, 6.5' coax & PL-259  
K400CNMO\* NMO base, 6.5' coax & PL-259  
K400N Type-N base, 13.5' coax & Type N



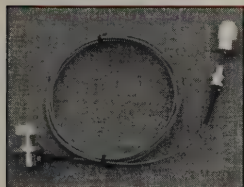
#### K540 Mirror/Luggage Rack Mount

Adjustable Mirror/Luggage rack mount  
accepts 1/2" to 7/8" tubing. Fits most  
mirrors and utility racks.

K540KM SO-239 base, 16.5' coax & PL-259  
K540 Mount Only



### C-SERIES CABLE ASSEMBLIES



C101  
SO-239 base, 6.5' RG316 Teflon  
coax & PL-259. Ideal cable  
assembly for trunk mount/remote  
head installations.

#### C101NMO

Same as C101 with NMO base.  
For Diamond's K-Series mounts  
only.

#### C213

Same as C101 with 13.5'  
cable assembly.



C110  
Extension cable for C101. 10'  
RG8X coax w/mini UHF  
connectors. Use C110 to extend  
cable to 16.5' for most front  
radio installations.

#### C110BNC

10' assembly similar to above,  
uses RG316 Teflon coax  
terminating in BNC-male.



C211  
SO-239 base, 16.5' cable  
assembly & PL-259.  
Combination of C101 & C110.

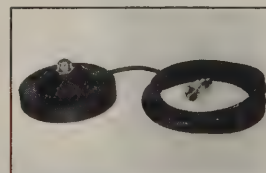
#### K400-3/8 C Special Trunk Mount for 3/8 x 24 Thread Antennas

Ideal mount for Outbacker  
Perth, OB Jr., and other  
medium weight antennas.

Note: Use C110, 10ft extension for front  
radio installation

Adjustment: 2 axis  
Power: 350 watts RMS  
500 w P.E.P.  
Cable: 6 1/2' RG316 Teflon  
coax w/PL-259

Spring recommended for stiff/heavy antennas

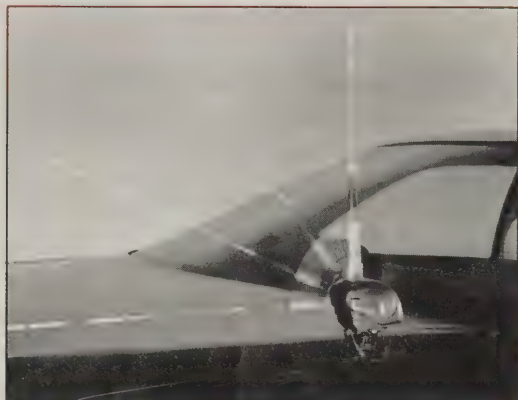


#### SPM35 Magnet Mount Base

Heavy duty 2.2 lb./4" magnet  
mount rated 25-500 MHz.  
Recommended for antennas  
under 45".



# Motorized Mount SWR/Power Meters & Duplexers/Triplexers



## K9000 Motorized Mount

Raise and lower your antenna with a touch of the button with Diamond's New K9000 motorized mount.

- K9000TM for trunk & hatchback installations.
- K9000LRM for luggage rack installations.
- Accepts "Ground Independent" Antennas up to 45" Length.
- 0-9° Range. Operates from 12VDC.
- Compatible with Diamond C-Series Base/cable assemblies.
- Recommended Antennas: SG7200NMO, SG7500NMO, NR73BNMO, SG7500A & NR770 Series.

## SWR/POWER METERS

Diamond Antenna Meters measure forward & reflected power and SWR. Illuminated meter, sensor switch and LED indicator. Power ratings listed below are for intermittent operations. SX600 and SX1000 are designed with 2 sensors for multiradio operation. 12 VDC @ 50 mA is required for displays. 6" w x 2" h x 4" d, 2 lbs.



### SX-1000 4-Band

Freq. MHz: 1.8-160/430-450/800-930/1240-1300  
 Power Ranges: 5/20/200W  
 Connectors: HF-VHF SO-239 UHF TYPE - N



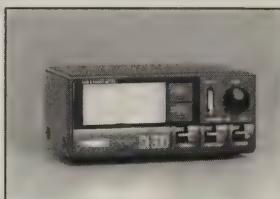
### SX-100

Freq. MHz: 1.6-60  
 Power Ranges: 30/300/3KW  
 Connectors: SO-239  
 Min. Power SWR Test: 20W



### SX-200

Freq. MHz: 1.8-200  
 Power Ranges: 5/20/200w  
 Connectors: SO-239  
 Min. Power SWR Test: 4W



### SX-600 dual band

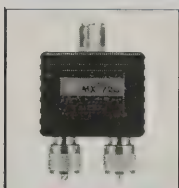
Freq. MHz: 1.8-160/140-525  
 Power Ranges: 5/20/200w  
 Connectors: SO-239  
 Min. Power SWR Test: 4W



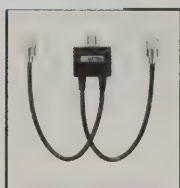
### SX-400

Freq. MHz: 140-525  
 Power Ranges: 5/20/200w  
 Connectors: SO-239  
 Min. Power SWR Test: 4W

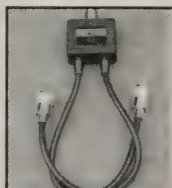
## Duplexers/Triplexers



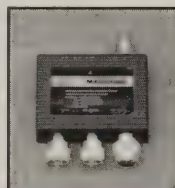
MX-72D



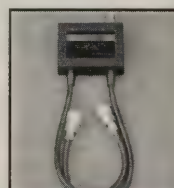
MX-72H/N



MX-214



MX3000D



MX62M



MX324

MODEL	MX37	MX72D	MX72H	MX72N	MX214	MX214D	MX324	MX324D	MX2000	MX2000D	MX3000	MX3000N	MX3000D	MX62M			
FREQUENCY BAND (MHz)	1.6-470 900-1300	LPF 1.6-30		HPF 140-150 400-460	140-150 220-225		LPF 1.5-150	BPF 220-225	HPF 400-550	LPF 1.6-60	BPF 110-170	HPF 300-950	LPF 1.6-160	BPF 350-500 850-1300	HPF 1.6-56 76-470		
PWR CW (ICAS) WATTS P.E.P.	100/50 200/100	400 1000	150 400	100 250	150/100 300/200		800 600	500	800 800	500	400 800	200 400	100 200	600 600			
THRU LOSS/DB	0.25/0.45	0.15	0.15	0.25	0.3/0.4		0.3	0.4	0.4	0.15	0.2	0.25	0.2	0.3	0.4	0.2	0.3
ISOL	45dB	60dB				45dB		40-50dB			60dB			55dB		50dB	
VSWR	1.2:1	1.2:1				1.2:1		1.2:1			1.2:1			1.2:1		1.2:1	
CONNECTOR COMPLEMENT	<div>N MIX 430 1200 M N</div>	<div>M MIX 144 430 M M</div>	<div>M MIX 144 430 M M</div>	<div>M MIX 144 430 M N</div>	<div>M MIX 144 220 M M</div>	<div>M MIX 144 220 M M</div>	<div>M MIX 144 220 430 M M M</div>	<div>M MIX 144 220 430 M M M</div>	<div>M MIX 50 144 430 M M M</div>	<div>M MIX 50 144 430 M M M</div>	<div>N MIX 144 430 1200 M M N</div>	<div>N MIX 144 430 1200 M N N</div>	<div>N MIX 144 430 1200 M M N</div>	<div>M MIX HF/6M 2M M M</div>			
CONNECTOR	12" Cable w/ Connectors	Direct	12" Cable w/Connectors		12" Cable w/Connectors	Direct	12" Cable w/Connectors	Direct	12" Cable w/Connectors	Direct	12" Cable w/Connectors		Direct	12" Cable w/Connectors			



# GAP: THE PERFECT ANTENNA

We at GAP realize there isn't a perfect antenna. No singular antenna will scream DX on 80 and be the best for local nets on 10. If anyone tells you there is, beware! The perfect antenna does not exist, but the right one for you may. If you want something to bust the pile on the low bands, then consider the Voyager. Just starting out in ham radio and need a great general coverage antenna, the Challenger is easy to assemble and for little effort will yield superior performance, especially on DX. Maybe you knowingly or unknowingly moved into one of those "restricted areas" where the Eagle's limited visibility, but unlimited ability is desired.



Voyager DX

Challenger DX

Eagle DX

This chart helps you select the right GAP antenna. When comparing GAPs, bandwidth is not a concern. With few exceptions, a GAP yields continuous coverage under 2:1 for the ENTIRE BAND.

All antennas utilize a GAP elevated asymmetric feed. A major benefit is the virtual elimination of the earth loss, so more RF radiates into the air instead of the ground. This feed is why a GAP requires **NO RADIALS**. Just as elevating a GAP offers no significant improvement to its performance, adding radials won't either, making set up a breeze.

**A GAP antenna has no traps, coils or transformers.** This is important. The greatest sources of failure in multiband antennas are these devices. Perhaps you heard someone discuss a trap that had melted, arced or became full of water. Improvements to these inherent problems are the focus of the antenna manufacturer, while the basic design of the antenna remains unchanged. **GAP improved the trap by eliminating it!** Removing these devices means they don't have to be tuned and, more importantly, won't be detuned by the first ice or rain. The absence of these devices improves antenna reliability, stability and increases bandwidth.

Another major advantage to a GAP antenna is its NO tune feature. Screws are simply inserted into predrilled holes with a supplied nutdriver.

The secret is out and people in the know say:

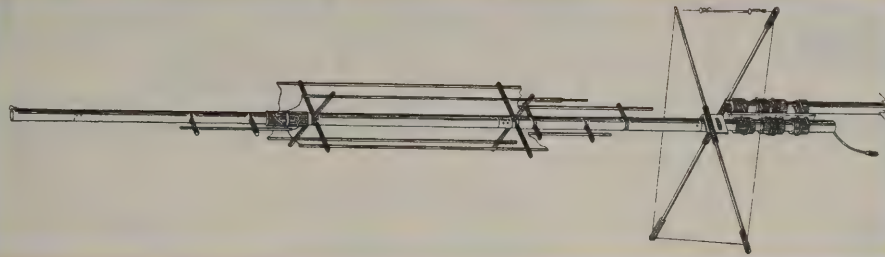
**CO**—"The GAP consistently outperformed base-fed antennas...and was quieter."

**73**—"This is a real DX antenna, much quieter than other verticals."

**RF**—"To say this antenna is effective would be a real understatement. Switching back and forth on 40m between another multiband HF vertical and the GAP, there was no comparison. Signals were always stronger on the GAP, sometimes by 5 units, not just DBs."

**Worldradio**—"These guys have solved the problem associated with verticals. That is, an awful lot of RF is wallowing around and dropping into the dirt instead of going outward bound. A half-wave vertical does need radials if it is end fed (at the bottom). But the same half-wave vertical does not (as much, hardly at all) if it is fed in the center."

**IEEE**—"Near field and power density analyses show another advantage of this antenna (asymmetric vertical dipole): it decreases the power density close to the ground, and so avoids power dissipation in the soil below it. The input impedance is very stable and almost independent of ground conductivity. This antenna can operate with high radiation efficiency in the MF AM standard broadcast band, without the classical buried ground plane, so as to yield easier installation and maintenance."



This all purpose antenna is designed to operate 10m-80m, WARC bands included. It sits on a 1-1/4" pipe and can be mounted close to the ground or up on a roof. Its bandwidth and no tune feature make it an ideal antenna for the limited space environment as well as a terrific addition to the antenna farm.

MODEL	BANDS OF OPERATION										HT	WT	MOUNT	COUNTER-POISE	COST
	2m	6m	10m	12m	15m	17m	20m	30m	40m	80m	160m				
Challenger DX	■	■	■	■	■	■	■	■	■	■		21 lbs	Drop In Ground Mount	3 Wires @ 25'	
Eagle DX			■	■	■	■	■		■			19 lbs	1-1/4" pipe	80" Rigid	
Titan DX			■	■	■	■	■	■	■	■		25 lbs	1-1/4" pipe	80" Rigid	
Voyager DX							■		■	■	■	39 lbs	Hinged Base	3 Wires @ 57'	

Just Released





# VHF and UHF Fixed Station Vertical Antenna

## Model G6-270R Dual-band Base Antenna for 2 Meter and 440 MHz.

Created from the same design as the G7 and G6 series. Rugged and Solid fiberglass construction.

Optimum Gain and Wide Bandwidth. Consists of 5/8  $\lambda$  over 5/8  $\lambda$  on 2M and 4 x 5/8  $\lambda$  on 440 MHz.

- Length: 7ft. 6 in.
- Weight: 5.3 lbs.
- Wind Survival: 100 mph.
- Mounting: 1-1/4" - 1-1/2" mast
- Max Power: 100 watts
- Gain: 6dBd VHF & UHF
- Bandwidth: 1.5:1 SWR 2 MHz - 2 Meters 10 MHz - 440 MHz.
- Feed: Shunt, DC ground
- Connector: N female



## Model G6-440 Omnidirectional Fixed Station

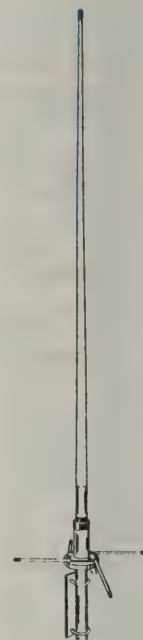
Each is pre-tuned at the factory for easy installation. Enclosed in a lightweight tapered fiberglass radome for low wind resistance. Compact size allows shipment via U.P.S. or Parcel Post.

### ELECTRICAL

- Maximum power input: 250 watts
- Gain: 6 dB
- Bandwidth: 8 MHz. under 1.5:1 SWR
- Impedance: 50 ohm nominal
- Lightning protection: direct ground
- Termination: Type N female

### MECHANICAL

- Length: 87"
- Weight: 5 lbs.
- Wind survival: 125 mph.
- Mounting: up to 2" mast



## G6-144B Two Meter Antenna Omnidirectional Fixed Station

6dB GAIN - compared to 1/2 wave dipole.

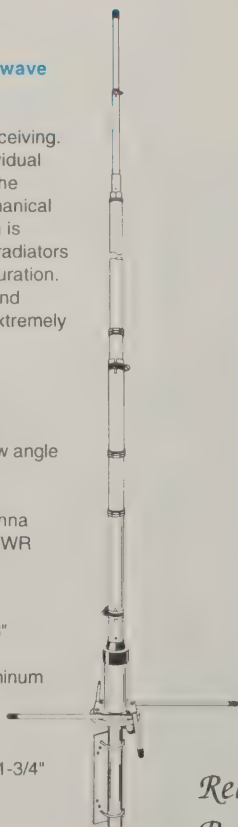
Get the tremendous advantage of 6 dB gain transmitting, 6 dB gain receiving. Whether your application is for individual fixed station or repeater operation the Hustler G6-144B has superior mechanical and electrical design. Optimum gain is achieved with two 5/8 wave-length radiators correctly phased in collinear configuration. Stated gain figure is conservative and maximum signal radiation is at an extremely low angle.

### ELECTRICAL

- 6 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
- Maximum radiation - extremely low angle
- 50 ohm feed impedance
- Field adjustable: 140-150 MHz.
- SWR at resonance: 1.2:1 at antenna
- Bandwidth: 4 MHz. under 2:1 VSWR
- Shunt-fed with D.C. grounding

### MECHANICAL

- Vertical element: 117" long, 1-1/8" telescopic to 3/8"
- Constructed of high strength aluminum
- Connector: SO-239
- Wind load: 26 lbs. @ 100 mph.
- Completely self-supporting
- Mounting: Vertical support up to 1-3/4"
- Shipping wt: 6.8 lbs.



## G7-144 Two Meter Antenna Omnidirectional Fixed Station

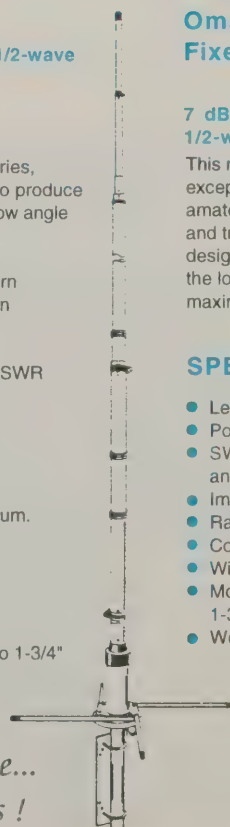
7 dB GAIN - compared to 1/2-wave dipole.

### ELECTRICAL

- Radiator: Collinear shunt-fed. Triple 5/8-wave elements in series, separated by 2 phasing coils to produce maximum gain and extremely low angle of radiation.
- 7 dB gain over 1/2-wave dipole
- Omnidirectional radiation pattern
- Extremely low angle of radiation
- Tuning range: 144-148 MHz.
- VSWR: 1.2:1 at resonance
- Bandwidth: 4 MHz. under 2:1 VSWR
- Power: 600 watts
- 50 ohm feed impedance
- Shunt fed with DC grounding

### MECHANICAL

- High strength fiberglass and alum.
- Completely self-supporting
- Length: 184"
- Radials: (4) 20-1/4" x 3/8" O.D.
- Connector: N-type
- Wind load: 26 lbs. @ 100mph.
- Mounting: Vertical support up to 1-3/4"
- Weight: 10 lbs.



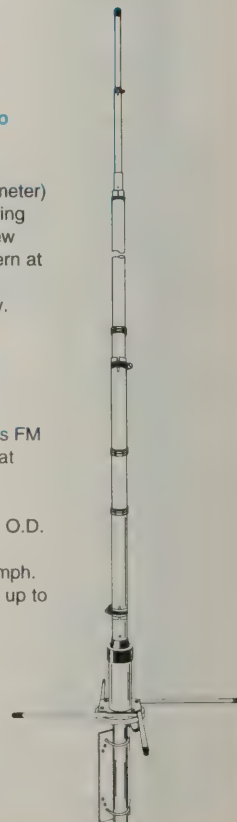
## G7-220 Omnidirectional Fixed Station

7 dB GAIN - compared to 1/2-wave dipole.

This rugged antenna means exceptional 220 MHz (1-1/4 meter) amateur performance, receiving and transmitting. A unique new design keeps the signal pattern at the lowest possible angle of maximum radiation efficiency.

### SPECIFICATIONS

- Length: 122" long
- Power capability: 600 watts FM
- SWR at resonance: 1.2:1 at antenna
- Impedance: 50 ohms
- Radials: (4) 14-3/4 x 3/16" O.D.
- Connector: Type N
- Wind load: 26 lbs. @ 100 mph.
- Mounting: vertical support up to 1-3/4" O.D.
- Weight: 7 lbs.



*Reliability & Performance...  
Beyond your Expectations !*





# VHF and UHF Mobile Antennas

## Collinear

### Model CGT-220

5.2 dB Gain 5/8" Over 1/4" Collinear Trunk-Lip Mount Antenna

- 1.1:1 SWR (typical) at resonance • 4 MHz. bandwidth under 1.5:1 SWR • Power rating: 200 watts FM • Height: 4' 9" including mount
- Spin knob to remove antenna
- 17' of low loss coax with connector

### Model CG-220

Has identical electrical characteristics as CGT-220 but with 3/8" x 24 threaded base

### Model CGT-144

5.2 dB Gain, 5/8" Over 1/4" Collinear Trunk-Lip Mount Antenna

- 6 MHz bandwidth • 1.5:1 SWR • Power rating: 200 watts FM • Length: 7' 1" including mount • 180° swivel ball for vertical positioning • 17' coax with connector • No drilling required

### Model CG-144

Same as CGT-144 but has 3/8" x 24 threaded base

## Stainless Steel Mounts

- Exceptional performance and quality
- 180° adjustable reinforced stainless ball
- Professional quality Cycloc bases for greatest mechanical stability
- Exclusive "C" backup plate allows external installation
- Supplied with all mounting hardware and cork pad
- Applicable with all Hustler and other 3/8" x 24 thread antennas

SSM-1 Professional Ball Mount and Spring

SSM-2 Ball Mount

SSM-3 Stainless Steel Spring with Coupling Stud

## Quick Disconnect

### QD-2 100% Stainless Steel

Remove antenna from mount in seconds with push and twist release. Every part including the compression spring is manufactured from the best available 100% stainless steel. Special design of enclosed compression and lock assembly assures freedom against ice and dirt jam up. Accommodates small, medium and large size mobile antennas. Equipped with 3/8" x 24 threads, female one end and male on the other.

## Professional Series Heavy Chrome

### Model C-32

Hustler professional ball mount. Furnished complete with rubber pad, steel backup plate, all mounting hardware, and hex wrench.

### Model C-29

Stainless steel, corrosion resistant and electropolished spring complete with 3/8" x 24 coupling stud.

### Model C-30

Chrome-plated steel spring complete with 3/8" x 24 coupling stud.

## RX Series

- 3.4 dB Gain; 5/8" , 100 watt rating
- 15 feet of coax with PL-259 connector
- Magnetic mount holds to 75 mph.

Model RX-2

2 meter, black and chrome

Model RX-220

220 MHz. black and chrome

Model RX-440

## FX Series

- 3.4 dB gain; 5/8" , 200 watt rating
- 15 feet of coax with PL-259 connector
- Magnetic mount holds to 100 mph.

Model FX-2

2 meter, black and chrome

Model FX-220

220 MHz., black and chrome

Model FX-2B

2 meter, all black

Model FX-220B

220 MHz. all black

## Unity Gain

### Model THF

VHF/UHF Trunk-Lip Mount Antenna

### Model UHT-1

VHF/UHF Roof/Deck Mount Antenna

### Model UGM

VHF/UHF Magnetic Mount Antenna

Extend range of handheld or portable radios. Trimmable 17-7 PH stainless steel radiator is cut to 1/4 wavelength for low SWR and unity gain from 140 to 500 MHz. Trim chart included. Highly efficient mylar-protected magnetic mount attaches conveniently to magnetic compatible surfaces. No drilling! Supplied ready for operation with 7' of mini-coax with BNC connector.

## Resonator Spring RSS-2

Finest quality stainless steel spring for use between resonator and Hustler antenna mast. This 3/4" x 3 x 1/2" spring absorbs shock when antenna strikes overhanging obstructions. Supplied ready for easy installation with 3/8" x 24 threads, female on one end, male on the other.

## Bumper Mount BM-1

Design is rugged for supporting Hustler antenna with Standard or Super resonators. Heavy stainless steel strap, stronger than chain, fits most bumpers inconspicuously. Assembly is easily installed and held rigid by "J" bolts at the top and bumper strap clamp at bottom.

Mount includes 180° adjustable swivel ball for vertical positioning of antenna. Hardware is zinc plated for superior resistance against corrosion.

## Multi-band Adapter VP-1

Automatic bandswitching using any three Hustler H.F. mobile resonators. Adapts with any Hustler H.F. mast (MO-1, MO-2, MO-3, MO-4) for tri-band operation easily and quickly.

## Model BBLT-144A

3.4 dB Gain Trunk-Lip Mount Antenna

- Adjustable 143-149 MHz.
- SWR: 1.1:1 at resonance
- Power rating: 200 watts FM
- Shunt-fed • Reduced static
- Length: 4'4" inc. mt. • Spring and 180° swivel ball for vertical positioning • 17' coax with connector • No drilling required

## BBL-144A

3.4 dB Gain Roof Mount Antenna

Same as BBLT-144A but mounts in 3/4" hole on a flat surface. 17' coax with connectors.

## Model SF-2

Low Cost 3.4 dB Gain

2 meter 5/8" for 3/8" x 24 thread mounts

- 1.2:1 SWR at resonance
- Power rating: 100 watts FM
- Tapered stainless radiator
- Length: 4'

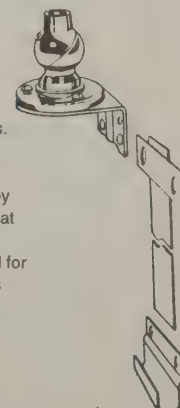
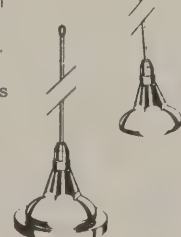
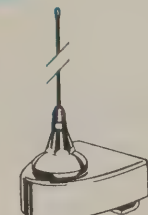
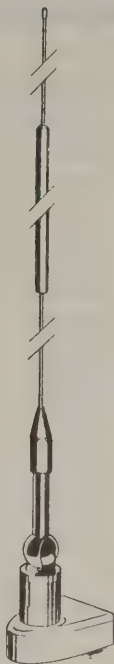
## Model SF-220

Low Cost 3.4 dB Gain

220 MHz 5/8" for 3/8" x 24 thread mounts

## Model MKR-2 Radial Kit

Contains three decoupling radials and mount to convert series-fed mobile VHF antennas to fixed operation. Performance is comparable to many regular base antennas. Suitable for permanent installations or portable use. Heavy-duty zinc plated mast bracket and hardware. Accepts antennas with standard 3/8" x 24 threaded base.

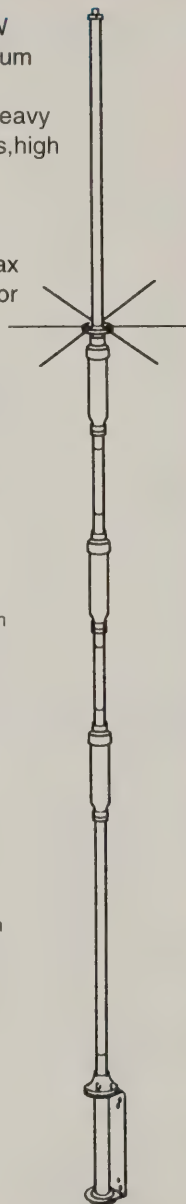






# Fixed Station Multi-Band HF Vertical Antennas

- Broadbanded - low VSWR at band edges
- Power capability - full legal limit on SSB or CW
- Solid one-inch fiberglass trap forms for optimum electrical and mechanical stability
- Heavy wall, high strength aluminum tubing, heavy duty aluminum mounting bracket and low loss, high strength insulators
- Stainless steel clamps and hardware
- Easy assembly and tuning
- Single line feed with any length of 50 ohm coax
- Use as ground mount with or without radials, or elevated mount with radials



## Model 6-BTV

- Bands** \_\_\_\_\_ 10-15-20-30-40 & 75 or 80 meters  
**Length/weight** \_\_\_\_\_ 24'/16.5 lbs.  
**Mounting** \_\_\_\_\_ Vertical support up to 1-3/4" O.D.  
**Wind load** \_\_\_\_\_ 29 lbs. @ 70 mph.  
**Power capability** \_\_\_\_\_ Full legal limit SSB/CW  
**VSWR at resonance** \_\_\_\_\_ 1.15 to 1 or better  
**Bandwidth** \_\_\_\_\_ VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. on 75 or 80 meters)

## Model 5-BTV

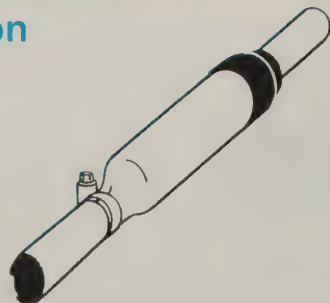
- Bands** \_\_\_\_\_ 10-15-20-40 & 75 or 80 meters  
**Length/weight** \_\_\_\_\_ 25'1" /17 lbs.  
**Mounting** \_\_\_\_\_ Vertical support up to 1-3/4" O.D.  
**Wind load** \_\_\_\_\_ 29 lbs. @ 70 mph.  
**Power capability** \_\_\_\_\_ Full legal limit SSB/CW  
**VSWR at resonance** \_\_\_\_\_ 1.15 to 1 or better  
**Bandwidth** \_\_\_\_\_ VSWR 2:1 or better at band edges on 10-40 meters (100 KHz. on 75 or 80 Meters)

## Model 4-BTV

- Bands** \_\_\_\_\_ 10-15-20-40 meters  
**Length/weight** \_\_\_\_\_ 21'5" /15 lbs.  
**Mounting** \_\_\_\_\_ Vertical support up to 1-3/4" O.D.  
**Power capability** \_\_\_\_\_ Full legal limit SSB/CW  
**VSWR at resonance** \_\_\_\_\_ 1.15 to 1 or better  
**Bandwidth** \_\_\_\_\_ VSWR 1.6:1 at band edges

## 30 Meter Add-on Kit for 4-BTV and 5-BTV

- Model 30-MTK**  
 Full 30 meter band coverage  
 Will not affect normal operation  
 Easy installation  
 All hardware included  
 Weight: 5 lbs.



## Hustler Resonators

### Standard Resonators

Power rating - 400 watts SSB

Part	Description	Approx. Bandwidth 2:1 SWR or Better	
RM-10	10 METER	150-250	KHz.
RM-11	11 METER	150-250	KHz.
RM-12	12 METER	90-120	KHz.
RM-15	15 METER	100-150	KHz.
RM-17	17 METER	150	KHz.
RM-20	20 METER	80-100	KHz.
RM-30	30 METER	50-60	KHz.
RM-40	40 METER	40-50	KHz.
RM-75	75 METER	25-30	KHz.
RM-80	80 METER	25-30	KHz.

### Super Resonators

Power rating - full legal limit. Super Resonators also offer wider bandwidth, especially on 40, 75 and 80 meters.

Part	Description	Approx. Bandwidth 2:1 SWR or Better	
RM-10-S	10 METER	250-400	KHz.
RM-11-S	11 METER	250-400	KHz.
RM-15-S	15 METER	150-200	KHz.
RM-20-S	20 METER	100-150	KHz.
RM-40-S	40 METER	50-80	KHz.
RM-75-S	75 METER	50-60	KHz.
RM-80-S	80 METER	50-60	KHz.



## Mobile HF Antennas

### Hustler Masts



**MO-1** Mobile mast, 54" high, for deck or fender mounting - folds over 15" above base.

**MO-2** Mobile mast, 54" high, for bumper mounting - folds over 27" above base.

**MO-3** Mobile mast, 54" high, solid - does not fold over.

### MO-4 HF Mobile Mast

- For use with Hustler HF resonators
- Only 22" long
- Suitable for trunk or deck mounting
- Includes 3 new tip rods



MO-4

*Reliability & Performance...  
Beyond Your Expectations!*



# VHF/UHF ANTENNAS

## 2 METER YAGIS

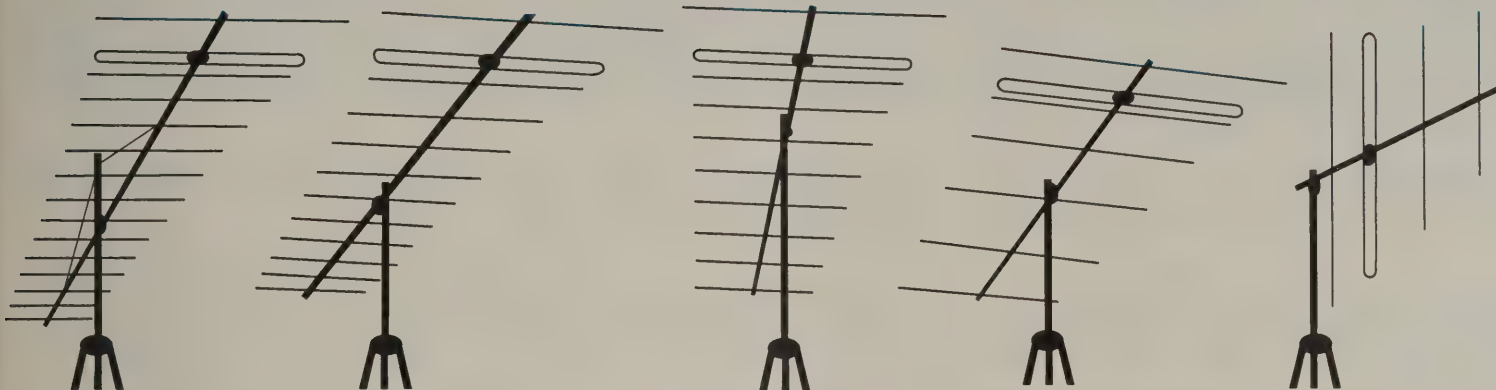
2M-15X

2M-12X

2M-10X

2M-7X

2M-4X



## 2 METERS

2M-20 LBX

2M-15X

2M-12X

2M-10 X

2M-7X

2M-4 X

### ELECTRICAL:

BANDWIDTH	SPEC. 144-146 USABLE 143-148 144-15.5 dBd	144-148 MHz	144-148 MHz	144-148 MHz	144-148 MHz	144-148 MHz
GAIN	145-15.5 dBd 146-15.4 dBd 147-15.3 dBd 148-13.7 dB	14.8 dBd	13.4 dBd	12.5 dBd	10.3 dBd	8.5 dBd
VSWR	Less than 1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
F/B	Greater than 30 dB	30 dB	25 dB	25 dB	25 dB	20 dB
BEAMWIDTH	E=26°, H=28°	E=26°, H=29°	E=28°, H=33°	E=32°, H=36°	E=46°, H=50°	62°
FEED IMP.	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BALUN	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax	4:1, 2 kW Coax

### MECHANICAL:

ELEMENT LENGTH	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.	40 5/8 in.
BOOM LENGTH	38.5 ft.	28 ft.	21 ft.	15 ft.	8 ft. 9 in.	4.2 ft.
TURN RADIUS	21 ft. 10 in.	15 ft. 5 in.	13 ft.	8 ft. 9 in.	5 ft.	4 ft.
WINDLOAD	2.19 sq. ft.	1.75 sq. ft.	1.6 sq. ft.	1.38 sq. ft.	.65 sq. ft.	.25 sq. ft.
WEIGHT	17 lbs.	11 lbs.	9 lbs.	6 lbs.	4 lbs.	2 lbs.
MAST	2 in.	1 1/2 in. or 2 in.	1 1/2 in. or 2 in.	1 1/2 in. or 2 in.	1 1/2 in. or 2 in.	1 1/2 in. max.

440-16X

440-10X

440-6X

1.2-15LBX

1.2-24LBX



440 MHz

432 MHz

1296 MHz

440-16X

440-10X

440-6X

432-30 LBX

432-20 LBX

1.2-44 LBX

1.2-24 LBX

1.2-15 LBX

### ELECTRICAL:

BANDWIDTH	420-450 MHz	420-470 MHz	420-470 MHz	430-440 MHz	425-440 MHz	1260-1300 MHz	1260-1300 MHz	1260-1300 MHz
GAIN	14.0 dBd	11.5 dBd	8.9 dBd	17.3 dBd	15.3 dBd	18.2 dBd	16.2 dBd	13.6 dBd
VSWR	Less than 1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
F/B	Greater than 20 dB	20 dB	20 dB	20 dB	20 dB	39 dB	39 dB	39 dB
FEED IMPEDANCE	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BALUN	Coax "N" 4:1, 2 kW	Coax "N" 4:1, 2 kW	Coax "N" 4:1, 2 kW	1:1 Sleeve, 2 kW	1:1 Sleeve, 2 kW	4:1 Rigid Coax	4:1 Rigid Coax	4:1 Rigid Coax
BEAMWIDTH	E=28°, H=32°	48°	60°			E=16°, H=18°	E=22°, H=24°	E=28°, H=30°

### MECHANICAL:

ELEMENT LENGTH	14 in. max.	14 in. max.	14 in. max.	14 in. max.	14 in. max.	4.5 in.	4.5 in.	4.5 in.
BOOM LENGTH	10 ft. 3 in.	4.75 ft.	28 in.	21 ft. 11 in. (9.6 wavelength)	12 ft. 4 in. (5.42 wavelength)	12 ft. 4 in.	75 3/4 in.	42 in.
TURN RADIUS	6 ft.	4.90 ft.	2 ft. 5 in.	12 ft. 4 in.	7 ft.	84 in.	38 in.	43 in.
WINDLOAD	0.74 sq. ft.	0.53 sq. ft.	0.2 sq. ft.	1.72 sq. ft.	0.9 sq. ft.	1 sq. ft.	1/2 sq. ft.	1/4 sq. ft.
WEIGHT	7.5 lbs.	4 lbs.	1.2 lbs.	9 lbs.	5 lbs.	10 lbs.	7 lbs.	4 lbs.
MAST	1 1/2 in.	1 1/2 in.	1/12 in.	2 1/8 in. max.	1 1/2 in.	2 in. O.D.	up to 2 in. O.D.	up to 2 in. O.D.
MOUNT	Center	Rear	Rear	Center	Center	Center	Center	Rear



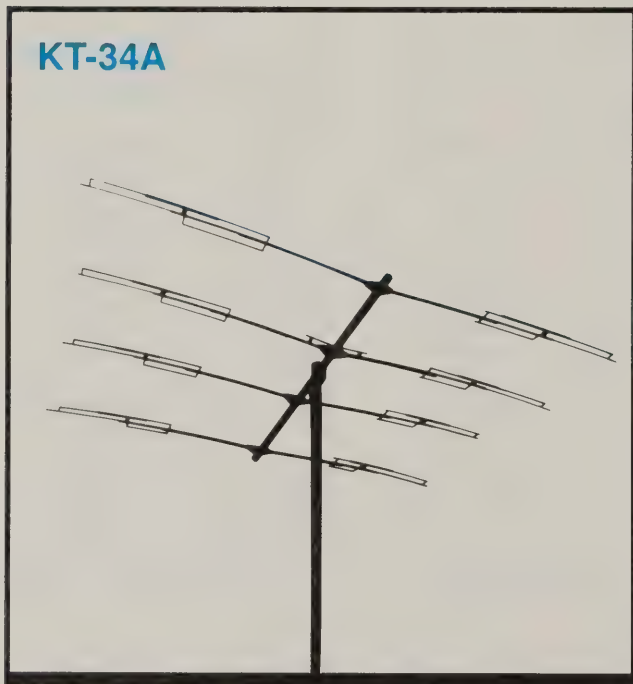
# TRIBANDERS

The KT-34A and KT-34XA have become pace-setters for tribander performance. The four element KT-34A offers an unusually compact solution for a three-band high performance installation. The six element KT-34XA has been designed to outperform all commercially available tribanders and many monobanders as well. The high performance of these tribanders results from their innovative construction. Traps, coils, and capacitors found on conventional tribanders are replaced by lossless linear loading and high-Q air capacitors constructed of aluminum tubing. These techniques coupled with KLM's unique dual-driven element system allow broadband performance with high gain and low VSWR remaining nearly constant across the three bands. The KT-34A can be upgraded to the KT-34XA at any time.

The boom length of the KT-34XA is doubled, when one tri-resonant and one full size 10 meter element is added. These changes increase the gain to 11-11.3 dBd on 10M, 9-9.5 dBd on 15M, and 8.5-9 dBd on 20M.

Structurally, the KT-34A is built tough. All the aluminum, including the boom, is strong weather resistant 6063-T832 alloy. All the hardware is stainless steel except for the mounting U-bolts. Virtually indestructible Lexan insulators support the elements and insulate them from the boom. Rotation is possible by most any ham rotor. Wind balance and wind survival are excellent.

## KT-34A



## KT-34XA



### SPECIFICATIONS

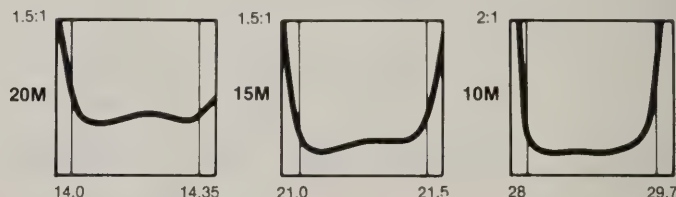
#### ELECTRICAL

BANDWIDTH ..... 14.0-14.350 MHz  
21.0-21.450 MHz  
28-29.7 MHz  
GAIN ..... 7 dBd  $\pm$  0.3 dB  
VSWR ..... 1.5:1  
F/B-F/S ..... 20 dB/30 dB  
FEED IMP ..... 50 Ohms w/Balun  
BALUN ..... 4:1, 5 kW PEP

#### MECHANICAL

ELEMENT LENGTH ..... 24 ft.  
BOOM LENGTH ..... 16 ft.  
TURN RADIUS ..... 16 ft.  
WINDLOAD ..... 6 sq. ft.  
WEIGHT ..... 45 lbs.  
MAST ..... 2 in. O.D.

KT34A vs. SWR



### SPECIFICATIONS

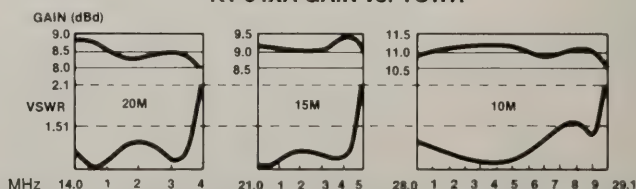
#### ELECTRICAL

BANDWIDTH ..... 14.0-14.350 MHz  
21.0-21.450 MHz  
28-29.1 MHz  
GAIN ..... 8.5-9 dB  
9-9.5 dB  
11-11.3 dB  
VSWR ..... 1.5:1  
F/B-F/S ..... 20 dB/40 dB  
FEED IMP ..... 50 Ohms w/Balun  
BALUN ..... 4:1, 5 kW PEP

#### MECHANICAL

ELEMENT LENGTH ..... 24 ft.  
BOOM LENGTH ..... 32 ft.  
TURN RADIUS ..... 21.5 ft.  
WINDLOAD ..... 9 sq. ft.  
WEIGHT ..... 68 lbs.  
MAST ..... 2 in. O.D.

KT-34XA GAIN vs. VSWR





# SATELLITE CIRCULARS — VHF/UHF

## ELECTRICAL:

	2M-14C	2M-22C	435-18C	435-40CX
BANDWIDTH .....	144-150 MHz	144-150 MHz	420-450 MHz	420-450 MHz
GAIN .....	11 dBc	13 dBc	12 dBc	15.2 dBc
VSWR .....	1.5:1	1.5:1	1.5:1	1.5:1
F/B .....	20 dB	20 dB	20 dB	20 dB
FEED IMP .....	50 Ohms	50 Ohms	50 Ohms	50 Ohms
BEAMWIDTH .....	38°	34°	34°	25°
ELLIPTICITY .....	3 dB max	3 dB max	3 dB max	3 dB max
BALUN .....	(2) 4:1 coax, 2 kW*	(2) 4:1 Coax, 2 kW*	(2) 4:1 Coax, 2 kW*	(2) 4:1 Coax, 2 kW*

## MECHANICAL:

ELEMENT LENGTH .....	40.625 in. max	40.625 in. max	13.25 in. max	13.625 in. max
BOOM LENGTH .....	12 ft. 9 in.	19 ft. 1 in.	7 ft. 4 in.	14 ft. 7 in.
TURN RADIUS .....	7 ft.	11 ft.	7 ft.	8 ft., 9 in.
WINDLOAD .....	1.25 sq. ft.	1.85 sq. ft.	0.5 sq. ft.	1.16 sq. ft.
WEIGHT .....	7.5 lbs.	11 lbs.	4.5 lbs.	10 lbs.
MAST .....	2 in.	2 in.	1.5 in.	1.5 in.
MOUNT .....	Center	Center	Rear	Center
POLARITY .....	Circular R.H. and L.H. switchable using CS-3Circular R.H. and L.H. switchable using CS-2			

\*Derate to 250W when using Switchers (supplied)



435-40CX

## HF LOG PERIODICS

**KLM's** Log Periodic Antennas offer extended coverage of the amateur bands and intermediate frequencies. The **10-30-7LPA** for example, covers 20, 15, and 10 Meters plus the WARC bands and many MARS frequencies. The addition of the **40M-1** dipole module provides 40 Meter operation as well. This can easily be accomplished using the **SK-8** Conversion Kit. This system is also available complete as the **7.2/10-30-LPA**. All HF Log Periodic Antennas are available with a Heavy Duty Boom at additional cost. Also, 10kW Baluns are available for a nominal charge.

## ELECTRICAL:

	10-30-7LPA	7.2/10-30LPA	6-30-15LPA
BANDWIDTH .....	10-30 MHz	7.2/10-30 MHz	6-30 MHz
GAIN .....	7 dBd typ	3/7 dBd typ	5.5 to 8 dBd
VSWR .....	1.5:1 typ	1.5:1 typ	2:1 and less, typ
F/B .....	15 dB	10/15 dB	15 dB typ
FEED IMP .....	50 Ohms, unbal.	50 Ohms, unbal.	50 Ohms, unbal.
BALUN(S) .....	4:1, 5 kW	4:1, 5 kW	(3) 4:1, 4 kW PEP

## MECHANICAL:

ELEMENTS .....	7	8	1.5
ELEMENT LENGTH .....	43 ft.	46 ft.	48 ft.
BOOM LENGTH .....	30 ft.	42 ft.	46 ft. (6-12-8)
TURN RADIUS .....	26 ft.	32 ft.	30 ft. (10-30-7)
WINDLOAD .....	8.25 sq. ft.	12 sq. ft.	24 sq. ft.
WEIGHT .....	70 lbs.	100 lbs.	150 lbs. (6-12-80) / 70 lbs. (10-30-7)
MAST .....	2 in.	2 in.	2 in./3 in.

## SK-8 Conversion Kit

This kit enables you to add 40 Meters to your **KLM** 10-30-7LPA antenna. The **SK8** kit includes a boom extension, a beta match for the dipole and all the necessary hardware including a full set of instructions. Purchase a **KLM** 40M Dipole to finish the upgrade.

By upgrading your present 10-30-7LPA to include 40M you will enjoy increased Front-to-Back on 20M and will see Front-to-Back gain on 40M similar to a 2 element beam. You will also enjoy forward gain on 40 Meters through the interaction of the full log array. It's an easy way to upgrade your log.



10-30-7LPA



7.2/10-30LPA



6-30-15LPA



**ORDER TOLL FREE: 1-800-558-0411 • www.aesham.com**

# AMATEUR ELECTRONIC SUPPLY<sup>®</sup>

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## AES<sup>®</sup> BRANCH STORES

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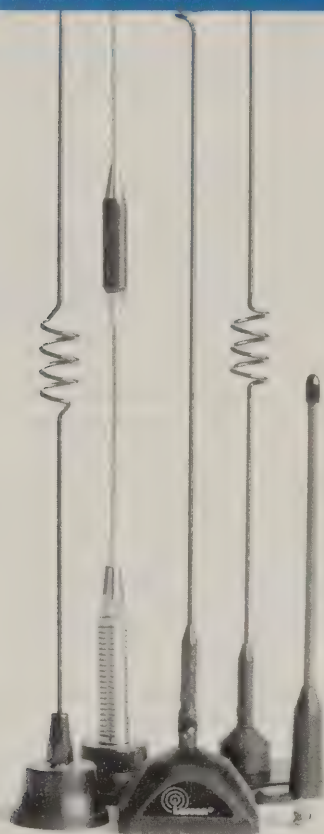
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**OVER 40 YEARS IN  
AMATEUR RADIO!**



# Quality Performance... You Can Hear



## Simultaneous VHF and UHF Communication Over Wide Bandwidths

### Larsen's Dual Band Series

Larsen dual band antennas provide excellent performance for simultaneous use of VHF and UHF amateur frequencies. Each Larsen dual band antenna is factory preset to guarantee optimum performance with no tuning required.

NMO 2/70 SH	NM 2/70	NMOQ 2/70 B	KD3 2/70
Freq. 144-148 / 442-448 MHz	144-148 / 442-448 MHz	144-148 / 442-448 MHz	144-148 / 442-448 MHz
Gain Unity	Unity	Unity	Unity
Power 100 Watts	100 Watts	100 Watts	25 Watts
Type VHF: Center Loaded 1/4 λ UHF: Center Loaded 1/4 λ	VHF: Center Loaded 1/4 λ UHF: Center Loaded 1/4 λ	VHF: Center Loaded 1/4 λ UHF: Center Loaded 1/4 λ	VHF: Loaded 1/4 λ UHF: 1/4 λ
Base NMO UHF BASE B	9 Round-mount	NMO UHF BASE B	TWC
Height 17"	17"	10"	8"
Whip W NMO 2/70 SH	W NMOQ 2/70 B	W NMOQ 2/70 B	N/A

λ = wave length

KD4 2/70	NMO 2/70 C	NMO 2/70 B	KG 2/70 UD PL
Freq. 144-148 / 442-448 MHz	144-148 / 442-448 MHz	144-148 / 442-448 MHz	144-148 / 442-448 MHz
Gain 2.4 dB	2.4 dB	2.4 dB	2.4 dB
Power 25 Watts	100 Watts	100 Watts	50 Watts
Type VHF: Loaded 1/4 λ UHF: 1/4 λ	VHF: 5/8 Wave UHF: Collinear	VHF: 5/8 Wave UHF: Collinear	VHF: 1/2 λ UHF: Collinear
Base BNC	NMO 2/70 BCO	NMO 2/70 BCO	KG 2/70 O/S
Height 8"	36.75"	33.5"	32.5"
Whip N/A	W 2/70	W 2/70 B	W KG 2/70

λ = wave length \*Ground plane required for gain.



## Low Impedance Design Creates A Premium On-Glass Antenna

### Larsen's Külglass Series

Larsen's Külglass (KG) series uses a patented low impedance design and advanced materials to produce the world's best on-glass antenna. Our KG series uses advanced resin polymer plastic to completely enclose the circuit board or loading coil for mechanical durability and weather resistance. 3M's best adhesive tape, plus Larsen's unique bonding enhancer, ensure the best possible grip to the glass.

KG 144 UD PL	KG 220 UD PL	KG 440 UD PL
Freq. 144-148 MHz	220-225 MHz	440-448 MHz
Gain 2.4 dB	2.4 dB	2.4 dB
Power 100 Watts	100 Watts	100 Watts
Connector PL 259 Loose	PL 259 Loose	PL 259 Loose
Type 1/2 λ	1/2 λ	1/2 λ
Base xG 144 O/S	KG 220 O/S	KG 440 O/S
Height 48"	26.5"	15"
Whip 3/4 KG 144	W KG 220	W KG 440

λ = wave length

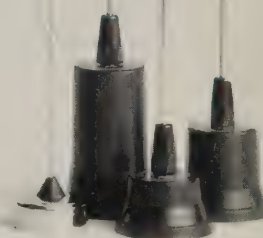
## Outstanding Transmit Range and Durable Construction

### Larsen's Kulduckie™ Portable Series

Superior transmit range and tough mechanical durability are the hallmark of Larsen portables. All of our center cores are made of brass or copper plated steel to maximize RF emission. Fully soldered connections and silver plated components improve electrical efficiency. Our double spring BNCs also reduce wear on your radio mount. Other mounting styles available.

KD4 146	KD4 146 HQ (2m)	KD14 2M HW
Freq. 144-148 MHz	144-148 MHz	144-148 MHz
Gain Unity	Unity	Unity
Power 25 Watts	25 Watts	25 Watts
Type 1/4 λ, Helical	1/4 λ, Helical	1/2 λ, Telescoping
Base BNC	BNC	BNC
Height 8"	10.5"	8.5" to 42"
Whip N/A	N/A	W KD14 2M HW

λ = wave length



## Proven Superior Performance and Rugged Dependability

### NMO Mobile Antennas

Larsen's own version of the standard 3/4" Motorola TAD/TAE type mount uses advanced design, materials, and construction to provide a premium mount. For demanding outdoor applications, the chemical resistant NMO series is housed in a resin polymer plastic shell which is completely molded around the nickel plated brass whip stud to eliminate moisture damage. Our superseal gasket also greatly reduces water intrusion under the base.

NMO 27 C	NMO 150 C	NMOQ SPEC	NMO 220 C	NMO 440 C
Freq. 27-31 MHz	144-174 MHz	136-512 MHz	220-225 MHz	440-448 MHz
Gain Unity	3 dBd	Unity	Unity	4.5 dBd
Power 200 Watts	200 Watts	200 Watts	200 Watts	200 Watts
Type Loaded 1/4 λ	5/8 λ	1/4 λ	5/8 λ	5/8 over 1/2 λ
Base NMO 27 BCO	NMO 150 BCO	N/A	NMO 220 BCO	NMO UHF BASE B
Height 53"	5' 7.5"	21"	34.5"	33"
Whip W 490	W 490	N/A	W 400	W 154

λ = wave length



Larsen Electronics, Inc.  
3611 NE 112th Avenue, Vancouver, WA 98682  
360 944-7551, Fax: 360 944-7556  
E-mail = larsen@larsenet.com

Canadian Larsen Electronics, Ltd.  
5049 Still Creek Ave., Burnaby, BC V5C 5V1  
604 299-8517, Fax: 604 299-4191

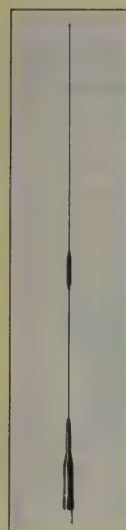


# Maldol

The  
Innovative  
Antenna Company

## THE ARD & VM SERIES - DUAL & MONOBAND ANTENNAS

Meet the hottest new line of Dual & Monoband mobile antennas - Maldol's ARD & VM series. Known a for style & performance that extends the range of any mobile rig. Pretuned, broadbanded & weatherproofed.



### DUAL BAND (144/430MHz)

Model	Length	Gain (dbd)	Power	Color	PRICE
ARD5B	19.3"	0 / 3.8	120W	BLACK	\$39 <sup>95</sup>
ARD6/6B	26.5"	2.6 / 4.9	120W	BLACK/CHROME	\$49 <sup>95</sup>
ARD 10/10B	34.4"	3.0 / 5.5	120W	BLACK/CHROME	\$49 <sup>95</sup>
ARD 12/12B	48.2"	4.3 / 6.8	150W	BLACK/CHROME	\$69 <sup>95</sup>
ARD 16/16B	64.8"	5.0 / 7.7	150W	BLACK/CHROME	\$79 <sup>95</sup>
VM727HP	36.4"	3.0 / 5.5	300W	CHROME	\$39 <sup>95</sup>
VM727CR	41.6"	3.8 / 6.2	150W	CHROME	\$39 <sup>95</sup>
VM727E	58.6"	4.5/7.2	150W	CHROME	\$49 <sup>95</sup>
VM727RE	59.4"	4.5/7.2	150W	CHROME	\$49 <sup>95</sup>

### MONO BAND

ARS50 (50MHz)	61.2"	1/4 Wave	100W	CHROME	\$49 <sup>95</sup>
ARS146 (146MHz)	56.0"	4.1	150W	BLACK/CHROME	\$49 <sup>95</sup>
VM2HP	43.2"	3.0	300W	CHROME	\$29 <sup>95</sup>
VM144HP	71.6"	4.5	200W	CHROME	\$39 <sup>95</sup>
ARS440/440B 440MHz	38.4"	5.5	150W	BLACK/CHROME	\$39 <sup>95</sup>

## THE WORLD CLASS IN HT ANTENNAS

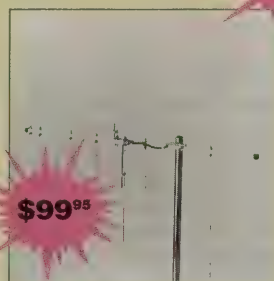
Acknowledged as the world standard for quality & performance. Maldol continues to outperform and out-sell all competition at a lower price.

HS702S	17.6" Whip (0/3.2dbd)	25W	Black	\$19 <sup>95</sup>
FR30	6-15" Tele. (-/ 2.1dbd)	25W	Black	\$39 <sup>95</sup>

## MOTORIZED TILT-OVER MOBILE MOUNT

The mobileer's dream! Ideal mate for ARDs and EXs but also works great for other antennas up to 65" long. Neat motorized unit quick-installs on hatchback or roof rack. Remote up/down switch fits under dash. One-touch tilting for low overhangs & garages.

**MK30H/K** Power Mount for antennas up to 65" long, 1lb **\$164<sup>95</sup>**



## HS-FOX 727 DUAL BAND PORTABLE/BASE YAGI

All stainless hardware with lightweight aluminum boom. The unit comes in its own carrying pouch for easy transport. Covers both 144 & 430MHz bands; Gain 9.5/11.5 db; rated 100 watts

**\$99<sup>95</sup>**



## AES Accessories

### AES SC189 Portable Rechargeable Camping Light

- Two 4W fluorescent lamps
- Built-in flashlight
- Built-in heavy duty rechargeable battery
- Low battery indicator

**\$49<sup>95</sup>**



### AES SC192 Portable Multi-function Work Light

- 12V DC, On/Off switch
- Powerful magnetic mount
- Built-in tripod stand with adjustable tilt

**\$19<sup>95</sup>**



### AES SC193 12 Volt DC High-Powered Car Vac

- Removable, washable filter
- Includes crevice tool for accessing tight areas
- 10 ft. car cord
- High powered motor

**\$19<sup>95</sup>**



### AES SC702 Cordless Rechargeable Spotlight

- 500,000 candle power beam
- Built-in NiCad rechargeable battery pack
- Unique On/Off locking trigger switch prevents battery run down when not in use
- Charge by car battery or AC adapter
- Provides up to 30 min. of continuous operation

**\$29<sup>95</sup>**



### AES SC7848 12V Portable Handheld Spotlight with Tripod

- Quartz halogen; 8" reflector- 1,000,000 candle power
- 8 ft. cord with lighter plug
- High-impact ABS handle conceals foldable tripod for emergency use - \$29<sup>95</sup>

### AES SC784

- Same as above, but 5" reflector - 400,000 candle power - \$19<sup>95</sup>



## POLYPHASER

### Low Inductance Copper Strap

Copper strap is much better than wire when used for a ground path because of its lower inductance. For example: 1.5" wide strap has a lower inductance than heavy #2.0 stranded wire. Easy to cut, solder, etc. Ideal for serious grounding applications around the shack and in marine installations!

Available in 1½, 3 & 6 inch widths and 25, 50, 75 or 100 foot rolls

See POLYPHASER in the Price List



New!

## DeLORME Tripmate Satellite Navigator



### Never Get Lost Again!

Tripmate is a high-performance, easy-to-use link to the satellite navigation technology of the Global Positioning System (GPS). Tripmate and a portable PC will show your location on detailed Street Atlas USA 4.0 maps - anywhere in the United States! An arrow shows your position on the map and moves as you travel.

### Outstanding Software!

The included Street Atlas USA 4.0 software in addition to being the most detailed and accurate, allows you to create maps for any occasion - insert symbols and notes, draw lines and polygraphs. Measure distances and areas. Import & locate con-

tact manager listings. Get ZIP Code demographics, boundaries. Unique Internet, GPS links. CD-ROM.

### Drive with Confidence!

Tripmate will track your location anywhere in the U.S., even where some other high-end receivers might let you down. It's perfect for anyone on the go with a portable PC, including mobile salespeople, truckers or families with RVs.

### Easy to Use!

If your portable PC has a CD-ROM drive, plug Tripmate into the serial port. If not, use a desktop PC to select the area of interest and download it to your portable.....

**DEL TRIPMATE \$149<sup>95</sup>**



# pro-am<sup>®</sup> by Valor<sup>®</sup>

"The Clear Connection"™

## Mounts and Accessories

### 160-6 Meters Mobile

#### PHF Series Antennas

Pro-Am's Monoband PHF Series consists of a black fiberglass lower section with integral coil and an adjustable (and removable) stainless steel whip (except for PHF160). These time-proven HF antennas are especially designed for maximum efficiency, low SWR, and broad bandwidth. They are power rated at 250 Watts P.E.P. and built to withstand considerable use. Standard 3/8 x 24 threads. Total assembled length on all models: 96". (Exception: PHF6: 58")

Model	Band	Band Width
PHF160	160 Meters	12 KHz
PHF75	75 Meters	36 KHz
PHF40	40 Meters	60 KHz
PHF30	30 Meters	100 KHz
PHF20	20 Meters	150 KHz
PHF17	17 Meters	175 KHz
PHF15	15 Meters	200 KHz
PHF12	12 Meters	300 KHz
PHF10	10 Meters	500 KHz
PHF6	6 Meters	1000 KHz

### Micro-Mag™ 2 Meter and 70CM

#### MM270B

Dual Band MICRO-MAG™ Kit with 9' of RG174 Cable to BNC Connector. 1/4 Wave at 2m and 5/8 Wave at 70cm. Typical VSWR: Less than 1.5:1 through the band. Max. Power: 50 Watts on 2m and 25 Watts on 70CM.

### Through-Glass 2 Meter and 70CM

#### GM270

Dual Band Through-The-Glass Antenna Kit featuring a 26" Copper Plated Whip with Black Finish and 14' of RG58 Cable to PL-259 Connector. Gain: 2.6dB over 1/4 wave at 2m & 4.0dB over 1/4 wave at 70cm. Typical VSWR: Less Than 2.0:1 through the bands.

Max. Power: 50 Watts. Field Tuneable.

### Through Glass 2 Meter GM144

2M Through-The-Glass Antenna Kit featuring a 27-1/2" Copper Plated Whip with Black Finish and 14' of RG58 Cable to PL-259 Connector. Gain: 2.5dB over 1/4 wave. VSWR: 1.5:1 through the band. Max. Power: 50 Watts. Field Tuneable.

(NOTE: Some newer automobiles are equipped with "passivated glass" which does not permit on-glass antennas to work properly. Please check your owner's manual or your dealer.)

### Hand-Held Antennas

#### 144BNC

Electrical 1/4 Wave "Rubber Duck" with high performance in the VHF range of 144-148 MHz. 12" in length. Provided with BNC connector for quick disconnect.

#### 450BNC

Full 1/4 Wave "Rubber Duck" with high performance in the UHF range of 430-470 MHz. 6-1/2" in length. Comes with BNC connector for quick disconnect.

### Mag Mount Kit

#### VAA002

2 Meter Mag Mount Kit. 17-7 ph Stainless Steel Whip, 12' of Cable with PL-259 Connector. Can be cut for 220 or 450 MHz. Available in Chrome or Black Finish. (Please specify "B" after Model Number for Black)

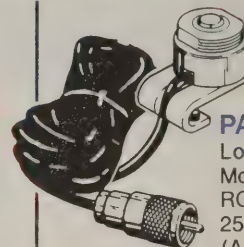
#### VAA002BN

Same as VAA002 but with BNC Connector.

### Dual Band Antenna

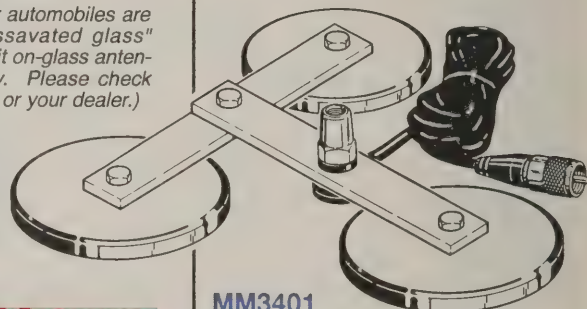
#### MO144-440

Dual Band Antenna to Cover it All! 19" Stainless Steel Whip. 1-1/8" Threads Match Pro-Am's Mounts and 3/4" Hole Motorola TAD/TAE Mounts. Great for all band scanners 25 MHz - 1.3 GHz. SWR: Less than 2:1. Gain: Unity on 2m and 2.1dB over 1/4 Wave on 70CM. Power FM: 150 Watts.



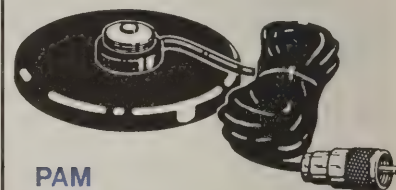
#### PAT2

Low Profile Trunk Mount includes 17' of RG58 Cable with PL-259 Connector. (Available in Black Finish: specify with a "B" suffix.)



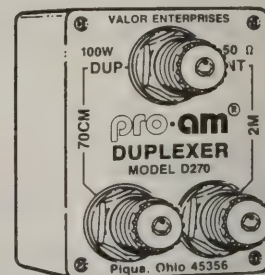
#### MM3401

Maxi-Magnet Mount Kit features three 5" (401) magnets properly spaced on a heavy duty aluminum frame. The MM3401 is pre-wired to Valor's patented wafer termination with 17' of RG58 coax and PL-259 connector. Accepts standard 3/8" x 24 antennas. Available with Black magnet cups: **MM3401B**.



#### PAM

3-3/4" Diameter Low Profile Magnet Mount Kit pre-wired with 12' of RG58 Cable to PL-259 Connector. (Available in Black or Chrome Plated; Add "B" suffix for Black)



#### D270

Duplexer for 2-Band Antennas. Provides cross-band operation with a 2m/70cm antenna. Power rated up to 100 Watts with 50 Ohm impedance. Size: 2.25" x 3" x 1".

### Multi-Band Antenna System

#### AB5

Pro-Am's AB5 System consists of a 4' aluminum mast and tri-top adaptor with resonators for 10, 15, 20 40, and 75 meters. Mast fits any standard 3/8 x 24 thread mount. The 10, 15, and 20 meter resonators cover SSB ranges without extra tuning. The interchangeable 40 and 75 meter resonators are easily tunable.

### VHF Antenna

#### PHB144

2M, 3dB Gain VHF Antenna featuring a matching Low Loss Coil and moto style threads. VSWR: 1.5:1. Power: 100 Watts.



# UNADILLA



## W2AU/W2VS 5-Band Antenna Kit

Provides Low SWR on 80 & 40 meters and resonant performance on 10, 15 & 20 meters. Includes 40 meter traps, W2AU 1:1 balun, end insulators, 120 ft. of #14 stranded copper wire, and instructions. Approximately 110 ft. long, rated 2KW PEP. **\$85<sup>95</sup>**

## REYCO W2VS Antenna Traps

Add these traps to your dipole for multiband operation on two to six bands. *For example:* add the 40 meter pair (KW-40) and get 40 and 80 meter operation. For 10, 15, 20, 40, 80 and 160 meters, add all five pairs - 33 combinations! Selecting traps is easy. Just list the bands you want to cover, listing the highest frequency band first. You will need a pair of traps for each band except the one with the lowest frequency..... See the Price List

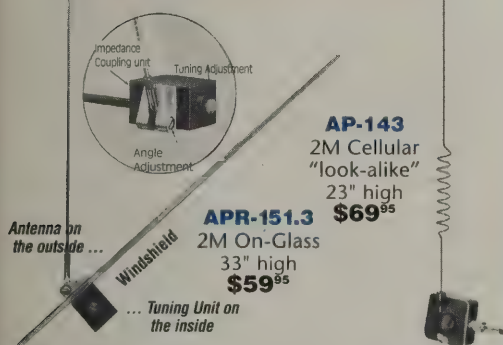
## W2AU Ferrite Baluns

Provide a smooth transition from unbalanced coaxial transmission line to balanced antennas such as dipoles, quads & yagis. Produces proper current distribution resulting in reduced feedline radiation for maximum power transfer, gain and reduced possibility of TVI and BCI. Replaces center insulator, DC grounded for lightning protection and has a convenient center eye hook for support. Usable from 1.8 to 40MHz, rated at 2KW PEP. Order 1:1 or 4:1 ratio or Beam Balun..... ea. **\$24<sup>95</sup>**

## W2DU Non-Transformer Choke Baluns

A high efficiency, transformerless 1:1 balun. The HF model is the only one available that works on 160 meters! They all handle a VSWR up to 5:1 at the legal power limit, allowing use with antenna tuners. The VHF model eliminates the usual rod and tube hardware balun assembly normally used at those frequencies. Order Model HF for 1.8 to 30MHz, VHF for 30 to 250MHz or Beam Balun for 40 to 10 meters.....ea. **\$26<sup>95</sup>**

## ANTENNA SPECIALISTS "On-Glass™" Mobile Antennas



No holes to cut! The small Tuning Unit attaches to the glass inside of the vehicle, and couples capacitively thru-the-glass to the Radiating Element mounted on the outside. Installs with a easily removable adhesive. Includes adhesive, 15 feet of coaxial cable with a PL-259 connector.

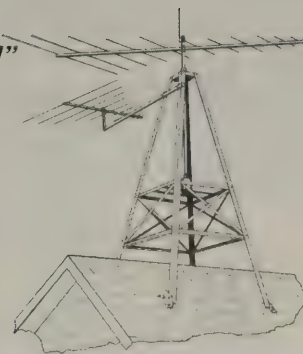
Power..... 100 watts Radiator..... Electrical 1/2-wave  
Frequency Range.....144-174 MHz Coupling Unit.....shunt fed, DC gnd  
(APR-151.3) Whip Material..... Stainless steel,  
138-150 MHz (AP-143) black DURA-COAT™ finish  
Bandwidth.....6 MHz, tunable Whip Length... 33 in. (APR-151.3)  
VSWR..... Less than 1.5:1 23 in. (AP-143)  
Impedance..... 50Ω nominal Cable 15 ft. RG-58/U w/PL-259



"Your Solution to Support!"

# ROOF-TOP TOWERS

High Quality • Anodized Aluminum  
Construction • Lightweight yet Extra Heavy Duty  
• Will Not Rust / Stainless Steel Bolts • Ideal for  
support of Ham Antennas • Weather Monitors,  
Scanner & AMSAT Antennas, Telemetry



MODEL	Height	*D, inches	Base width	Max Ant. in sq. ft. @ 87 mph	100 mph	112 mph	Max. Ant. weight	Shipping weight	Price w/UPS
RT-424	4.5	34.75	24"	6	4.5	3.6	100 lbs.	20 lbs.	<b>\$159.95</b>
RT-832	8.0	43.75	32"	8	6	4.8	120 lbs.	36 lbs.	<b>\$229.95</b>
RT-936	9.0	43.75	36"	18	13.5	10.5	130 lbs.	78 lbs.	<b>\$389.95</b>
RT-1832	17.5	37.62	32"	12	9	7.2	110 lbs.	88 lbs.	<b>\$524.95</b>

\*D=Distance from top surface to rotor mount

# TOWERS & HAZER

**You NEED the HAZER** The Hazer is a unique tram that rides up & down the outside of your **Martin** or Rohn tower. Raise and lower your antennas by simply turning a winch! Hazer 2, 3, 4, 5 and 6 wrap around the tower and work best on 50 ft. towers. Hazer 7 incorporates it's own separate track.

**COMPLETE TOWER PACKAGE INCLUDES:** 10-foot Tower Sections; Concrete footing; Hinged Base, for walk up erection; HAZER, winch, cable, etc; Kevlar Guy Wire Kit, turnbuckles, earth screw anchors, hardware; Premium Thrust Bearing, 10-foot Mast and 9 ft. Earth Ground Rod. Shipped motor freight **PREPAID**.

ORDER #	TOWER PACKAGE	TOTAL
M1330A	30 ft., 12 sq. ft., 87 MPH w/Hazer 5	<b>\$1615.95</b>
M1340A	40 ft., 12 sq. ft., 87 MPH w/Hazer 5	<b>\$1832.95</b>
M1840A	40 ft., 16 sq. ft., 87 MPH w/Hazer 6	<b>\$2150.95</b>
M1850A	50 ft., 16 sq. ft., 87 MPH w/Hazer 6	<b>\$2410.95</b>
M1860A	60 ft., 15 sq. ft., 87 MPH w/Hazer 7	<b>\$3356.95</b>
M1870A	70 ft., 15 sq. ft., 87 MPH w/Hazer 7	<b>\$3660.95</b>

## HAZERS FOR ROHN 20/25 TOWERS

CAT #	MAX LOAD	WIND ABILITY	MATERIAL	PRICE
H-2	175 Lbs.	12 Sq. Ft.	Aluminum	<b>\$359.95</b>
H-3	150 Lbs.	8 Sq. Ft.	Aluminum	<b>\$269.95</b>
H-4	200 Lbs.	16 Sq. Ft.	Galv. Steel	<b>\$344.95</b>

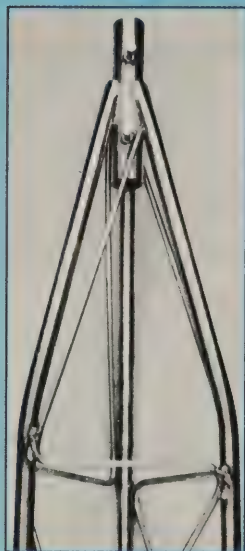
# TOWER ACCESSORIES

ORDER#	DESCRIPTION	Price	ORDER#	DESCRIPTION	Price
M-1049	9' Galv. Steel Mast; 2" Dia.	<b>\$58.95</b>	TB-25	Thrust Bearing	<b>\$89.95</b>
MA-1049	9' Alum. Mast; 1.92" Dia.	<b>\$68.95</b>	MC-10	Mast Adapter-For Non-Rotating Setups	<b>\$24.95</b>
MA-2069	9' Alum. Mast; 2.37" Dia.	<b>\$99.95</b>	LB-3755	Lag Bolts	<b>\$9.95</b>
MA-5050	5' Alum. Mast; 1.31" Dia.	<b>\$36.95</b>	LR-8400	Lightning Rod Kit	<b>\$148.95</b>
MA-1050	5' Alum. Mast; 1.92" Dia.	<b>\$55.95</b>	*RA-6024	24" Side Arm	<b>\$59.95</b>
HP-3000	3000lbs Break Kevlar Cbl.	<b>95¢ ft</b>	*RA-6048	48" Side Arm	<b>\$76.95</b>
HP-4500	4500lbs Break Kevlar Cbl.	<b>\$1.49 ft</b>	KB-1000	57" Side Arm	<b>\$81.95</b>
NEW!	Side Arm for H-2,3,4 HS1301	<b>\$44.95</b>	ML-2500	Messenger Line Kit	<b>\$69.95</b>
BW-8001	Brake Winch for H-2,3,4	<b>\$73.95</b>	ES-60	Earth Screw Anchor 48"	<b>\$25.95</b>
HR-6010	Bearing Set for H-5, H-6	<b>\$44.95</b>	TB-3806	Turnbuckle 3/8 x 6	<b>\$15.95</b>
HR-2040	Roller Bearing Set for H-2,3,4	<b>\$59.95</b>	* RA sidearms are for roof-top towers and include hardware		

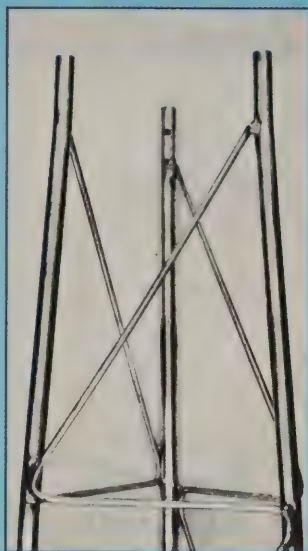
**Above Prices Include 48 State Shipping!**



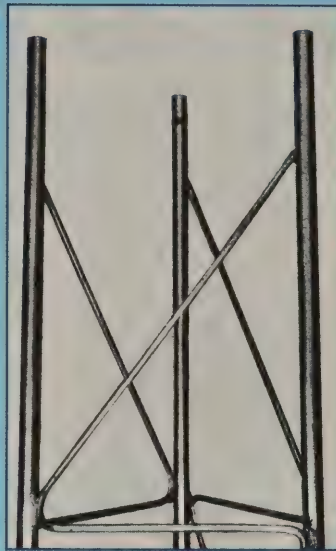
# UNIVERSAL TOWERS



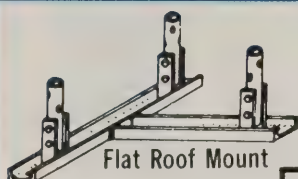
TOP SECTION



TAPER SECTION



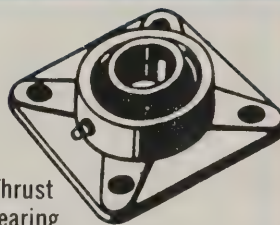
STRAIGHT SECTION



Flat Roof Mount



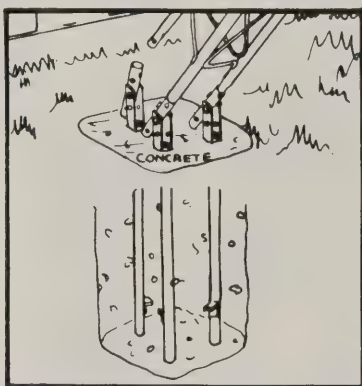
Rotor Plate



Thrust Bearing



Base Legs



Base Legs installed in concrete showing Hinge-Over feature.

Top Section with Thrust Bearing Plate

To: **AMATEUR ELECTRONIC SUPPLY®**  
5710 W. Good Hope Road  
Milwaukee, WI 53223

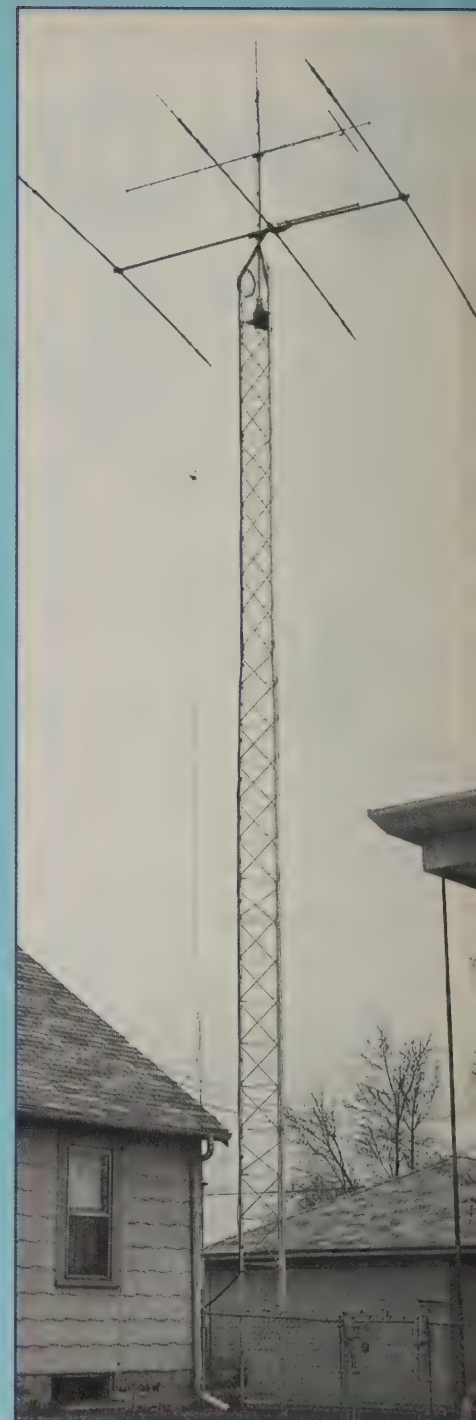
please send me the latest  
**UNIVERSAL TOWERS** Catalog.

Name \_\_\_\_\_

Ham Call (if any) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_



Here's a 50 ft. **UNIVERSAL Self-Supporting Aluminum Tower** installed at the QTH of Ted Willett W9NHE. This set up made a BIG **DIFFERENCE** — he really gets out!

Before you buy a tower consider the advantages of Aluminum — it's Strong, Lightweight, Rust Free and easy to assemble and erect.

**UNIVERSAL** offers 10 ft. sections or complete towers ranging from 30 to 100 ft. with a choice of wind load ratings and accessories to meet your specific needs.

**A listing and description of UNIVERSAL TOWERS is shown in the Price List. For more info fill out and mail the Coupon along with \$1.00 to receive their latest Catalog.**



### MA SERIES CRANK-UP TUBULAR TOWERS

**Will handle 10 sq. ft. antennas at 50 MPH winds.**

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
MA-40	40 ft.	21' 6"	2	242	3" sq.	4½"	12"x12"x12" .....	\$ 679.95
MA-550	55 ft.	22' 1"	3	435	3" sq.	6"	18"x18"x18" .....	1069.95
MA-550MDP*	55 ft.	22' 1"	3	620	3" sq.	6"	3'x3'x5' .....	2932.95
MA-770	71 ft.	22' 10"	4	645	3" sq.	8"	3'x3'x6' .....	2529.95
MA-770MDP*	71 ft.	22' 10"	4	880	3" sq.	8"	3'x3'x5½' .....	3999.95
MA-850MDP*	85 ft.	23' 6"	5	1128	3" sq.	10"	4'x4'x6' .....	5391.95

\*Standard bases and eave mounts included with all towers (except MA-770, 770-MDP and 850 MDP)

• MDP models complete with heavy-duty motor drive with positive pull down.

### FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

**Will handle 18 sq. ft. antennas at 50 MPH winds.**

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
TX-438	38 ft.	21' 6"	2	355	12½"	15"	3'x3'x5' .....	\$1142.95
TX-455	55 ft.	21' 6"	3	670	12½"	18"	3'x3'x6' .....	1399.95
TX-472	72 ft.	22' 8"	4	1040	12½"	21½"	4'x4'x7' .....	2832.95
TX-472MDP*	72 ft.	22' 8"	4	1210	12½"	21½"	4'x4'x7' .....	3899.95
TX-489	89 ft.	23' 4"	5	1590	12½"	25½"	4'x4'x7' .....	4927.95
TX-489MDPL*	89 ft.	23' 4"	5	1800	12½"	25½"	4'x4'x8½' .....	7390.95

\*TX-472MDP includes heavy duty motor drive with positive pull down. \*TX-489MDPL comes with heavy duty motor drive with dual level wind and positive pull down. MDPL models include fully operational limit switch packages.

### FREE STANDING HEAVY-DUTY CRANK-UP TOWERS

**Will handle 30 sq. ft. antennas at 50 MPH winds.**

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
HDX-538	38 ft.	21' 6"	2	600	15"	18"	3'x3'x6' .....	\$1477.95
HDX-555	55 ft.	22'	3	870	15"	21½"	4'x4'x6' .....	2099.95
HDX-572	72 ft.	22' 8"	4	1420	15"	25½"	4'x4'x7' .....	4434.95
HDX-572MDPL*	72 ft.	22' 8"	4	1600	15"	25½"	4'x4'x8½' .....	6775.95
HDX-589MDPL*	89 ft.	23' 8"	5	2440	15"	30½"	5'x5'x8½' .....	8869.95
HDX-689MDPL*	89 ft.	23' 8"	5	3450	18"	37½"	5'x5'x9½' .....	17,135.95
HDX-5106MDPL*	106 ft.	24' 8"	6	3700	15"	37½"	5'x5'x9½' .....	18,647.95

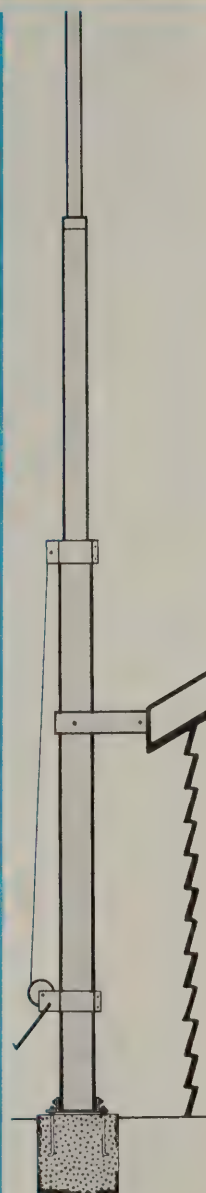
\*Includes heavy-duty motor drives with dual level wind and positive pull down. MDPL models include fully operational limit switch packages. \*HDX-689MDPL rated 60 sq. ft. of antenna at 50 mph winds. HDX-5106MDPL rated at 35 sq. ft. of antenna at 50 mph winds

### FREE STANDING "LOW-PROFILE" COMPACT CRANK-UP TOWERS

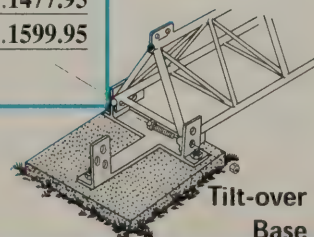
**The SS will handle 18 sq. ft. and HD, 24 sq. ft. antennas at 50 MPH winds.**

MODEL NO.	HEIGHT MAX.	HEIGHT MIN.	NUMBER SECTIONS	WT #	SECTION OD Top	SECTION OD Bot.	BASE SIZE	AES PRICE
TMM-433SS*	33 ft.	11' 4"	4	315	10"	18"	3'x3'x4' .....	\$1219.95
TMM-433HD	33 ft.	11' 4"	4	400	12½"	20½"	3'x3'x5' .....	1477.95
TMM-541SS	41 ft.	12'	5	430	10"	20½"	3'x3'x4½" .....	1599.95

\* Rotators must be top mounted on SS models. Yaesu G800SDX will fit in and nest.



**THE PRICE LIST HAS A COMPLETE LIST OF ACCESSORIES**



**WRITE OR CALL FOR A COMPLETE U.S. TOWER CATALOG - FREE!**



## ROHN® Heavy Duty HDX-Series Towers for HAM RADIO

All steel with X-brace construction for strength that allows a free-standing configuration without guy wires at 70 mph windspeed with antennas up to 10 sq. ft. wind area and boom lengths not exceeding 10 ft. The galvanized steel provides an attractive and maintenance-free finish. The entire tower can be assembled on the ground and hinged up in to position with the optional hinged base, or built vertically, section by section. Supplied with BXB base stubs for concrete mounting, rotator plate, mast clamp and hardware. All makes of rotators can be installed on the rotator plate inside of the top section. Tubing furnished that can be held in place with the mast clamp on the top plate to act as a thrust sleeve for a 1-1/4 in. mast.

Model	Height	Sections	Windload @ 70 mph	Weight	PRICE
HBX-40/BXB-6	40 ft.	5	10 sq. ft.	276 lbs	\$422 <sup>95</sup>
HBX-48/BXB-7	48 ft.	6	10 sq. ft.	353 lbs	\$565 <sup>95</sup>
HBX-56/BXB-8	56 ft.	7	10 sq. ft.	444 lbs	\$710 <sup>95</sup>

### Heavier Capacity HDBX-Series

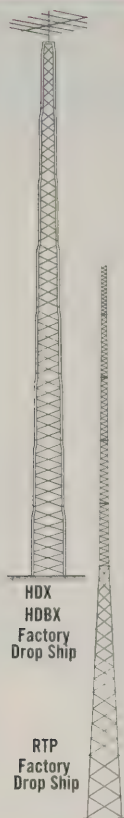
Same structural features of the HDX, but capable of up to 18 sq. ft. of antenna capacity at 70mph wind speed.

Model	Height	Sections	Windload @ 70 mph	Weight	PRICE
HDBX-40/BXB-7	40 ft.	5	18 sq. ft.	330 lbs	\$526 <sup>95</sup>
HDBX-48/BXB-8	48 ft.	6	18 sq. ft.	422 lbs	\$697 <sup>95</sup>

### RTP-Series

A new line of Rohn self-supporting amateur towers designed to the latest EIA revisions. All models are hot dip galvanized after fabrication with a minimum of 2 oz. of zinc per square ft. of surface. They are shipped complete with the necessary sections, rotator plate, top plate, short base or foundation hardware, grounding materials and anti-climb warning sign. Some sections are also supplied with step bolts for climbing. The rotator plate is pre-drilled to accept the most popular rotators. The top plate is predrilled to accept a TB-3 thrust bearing for a 2 inch mast or a TB-4 for a 3 inch mast. The thrust bearing is optional and must be ordered separately. These towers are designed for 70, 80 or 90 mph basic wind speeds and to accommodate most amateur antenna loads to heights of 190 feet. Shown here is a selection of popular ham models.

Model	Height	Sections	Windload @ 70 mph	Weight	PRICE
SSO40D70RTP	40 ft.	2	16.7 sq. ft.	501 lbs	\$1584 <sup>95</sup>
SSO50D70RTP	50 ft.	3	15 sq. ft.	564 lbs	\$1922 <sup>95</sup>
SSO60D70RTP	60 ft.	3	15 sq. ft.	1013 lbs	\$2799 <sup>95</sup>
SSO70D70RTP	70 ft.	4	13.3 sq. ft.	1076 lbs	\$3137 <sup>95</sup>
SSO80D70RTP	80 ft.	4	13.3 sq. ft.	1539 lbs	\$4172 <sup>95</sup>
SSO90D70RTP	90 ft.	5	11.7 sq. ft.	1656 lbs	\$4511 <sup>95</sup>



## Glen Martin Engineering

Featuring a selection of complete Aluminum Tower Packages, Roof-Top Tripods and the Hazer Antenna Tram System. Factory Drop Ship. Price includes 48-State Shipping.

## U.S. TOWER

Self-supporting steel crank-up towers  
Three compact models: **TMM-series** •  
Six standard models: **TX-series** • Five  
heavy-duty models: **HDX-series** • Seven  
tubular crank-up models: **MA-series** •  
Accessories • Factory Drop Ship

## HY-GAIN

### Steel Crank-up Towers

Four models available:  
37, 52, 54 and 70 ft.  
Factory Drop-Ship

See Price List & Index for more information on these Manufacturers' products



**AR-40 Lightweight** • For large TV/FM & smaller Ham Antennas up to 3.0 sq. ft. windload area when mounted in-tower, or 1.5 sq. ft. mast mounted with supplied lower support bracket. Rotor: 17 3/8" h x 8" dia., 12 ball bearings, disc brake. Accepts mast sizes up to 2 1/2" diameter. Automatic, silent control box - dial & touch for desired direction. Use Belden 8-wire control cable. 14 lbs ..... **HYG 305 \$239<sup>95</sup>**

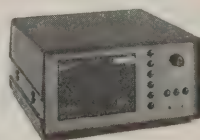
**CD-45-II Medium Duty** • For antennas up to 8.5 sq. ft. windload area when mounted in-tower, or 5 sq. ft. mast mounted with supplied lower support. Rotor: 17 3/8" h x 8" dia., 48 ball bearings, disc brake. Mast sizes up to 2 1/2" dia. Illuminated directional indicator, snap action rotation switches, disc brake. Meter face reversible for N or S center scale. Use Belden 8-wire cable. 20 lbs ..... **HYG 302 \$339<sup>95</sup>**

**HAM IV Heavy Duty** • For medium-sized antennas with up to 15 sq. ft. windload area mounted in-tower, or 7.5 sq. ft. mast mounted with opt. lower bracket. Rotor: 13 3/8" h x 8" dia., 98 ball bearings, electric locking steel wedge brake. Accepts mast sizes up to 2 1/2" dia. Illuminated indicator, separate snap-action brake & rotation switches, N or S center scale. Use Belden cable. 24 lbs ..... **HYG 304 \$449<sup>95</sup>**

**HAM V** has DCU-1 control box.... **HYG 307 \$769<sup>95</sup>**

**T2X Tailtwister Extra Heavy Duty** • For large antennas up to 20 sq. ft. windload when mounted in-tower, or 10 sq. ft. mast mounted with optional lower support bracket. Rugged casting - 14 1/8" h x 9 5/8" dia., 138 ball bearings, electric locking steel brake. Mast sizes up to 2 1/2" diameter. Illuminated directional indicator, separate snap action brake and rotation control switches, North or South center scale. Belden 8-wire cable. 28 lbs. .... **HYG 303 \$539<sup>95</sup>**

**HDR-300/A Deluxe Extra Heavy-Duty** • In tower mount - for large antenna arrays up to 25 sq. ft. windload. Rotor: 7" x 9" x 10" h, 138 ball bearings, solenoid operated locking brake. Masts up to 3" diameter. Digital directional indicator accurate to 1°. Separate brake and rotation controls. Use Belden 8-wire control cable. 55 lbs..... **HYG 300 \$1049<sup>95</sup>**

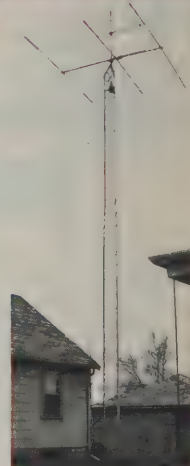


**DCU-1 Digital Rotor Control** Digital and Analog displays with 6 presets. Preprogram your favorite beam headings! One-degree accuracy. RS-232 input with for computer control. For T2X or Ham IV. **HYG 306 \$539<sup>95</sup>**

## UNIVERSAL

### FREE STANDING ALUMINUM TOWERS

- ★ HAM RADIO TV & FM
- ★ RUGGED
- ★ LIGHTWEIGHT
- ★ RUST FREE
- ★ EZ ASSEMBLY & INSTALLATION



Configurations available from 30-100 feet with various wind load selections to meet almost any application. Self-Supporting - no need for unsightly guy wires at rated load. Factory Drop-Ship. For more information see the Price List and the Index for the Universal display page.



## PHILIPS Antenna Rotator

**U-105 Antenna Rotator** featuring a one-piece cast aluminum housing, large bearing surfaces, reinforced mast support and a ball bearing for the vertical load. Precision-cut, hardened steel drive train and high torque-well equipped to handle small to medium VHF/UHF amateur & the largest TV & FM arrays. Control unit is smooth & quiet, synchronized with the drive by synchronous motors ..... **\$69<sup>95</sup>**

Rotation Range ..... 360° ±5°-0  
Rotation Time ..... 70 Seconds  
Rotation Torque ..... 8 ft. lbs.  
Max. Vertical load ..... 100 lbs.  
Support Mast Size ..... 1 1/4" diameter  
Control unit ... 7" w x 5 1/4" d x 2 3/8" h  
Weight (Rotor + control) .10 lbs  
Control cable (4-wire) Belden 8484

**TB-105 Support Bearing** for extra-sturdy installation when using the U-105 rotator. Relieves wear and tear on the drive unit imposed by wind loads. All ball bearing design, weather-tight seal. Installs on the support mast, above the U-105 ..... **\$18<sup>95</sup>**

## YAESU Special Rotators

More rotators... see Index & YAESU in the Price List



**G-5400B Azimuth-Elevation Rotator** For satellite, moonbounce, etc. where both horizontal and vertical rotation is required in a single unit. Full 180° rotation in 58 seconds; 360° azimuth rotation time: 50 seconds. Handles 440 lbs of vertical load and masts from 2" to 2 1/2". The control box has large dual meters which show separate azimuth and elevation indication with ±4% aiming accuracy. Use Belden 8-wire control cable..... **\$539<sup>95</sup>**

**G-500A 180° Elevation Rotor** For satellites, moonbounce work, etc. Smooth, 180° elevation rotation time in 60 seconds. Large meter with ±3% aiming accuracy. Accepts boom diameters from 1 1/4" to 1 3/8". Use Belden 8-wire control cable ..... **\$279<sup>95</sup>**



# questions answers

## **How can I get more information on amateur radio?**

The American Radio Relay League, ARRL, has a hotline number to call when you have questions about how to get into the hobby, and where to look for local information. ARRL can also help you line up a National (VE) Volunteer Examination team test session. You can call the ARRL at (800) 326-3942, fax them at (860) 594-0259, or e-mail at ead@arrl.org. You can also call W5YI at (800) 669-9594 for test information.

## **What causes rotator failure?**

Besides certain avoidable problems, such as upside-down mounting, and "Acts of God" (lightning, etc.), the number one cause of rotator failure is under-specification; buying a rotator that is too small for your application. When this occurs the gears usually get ground to bits during a windstorm.

## **When I called one AES location, why did a different AES location answer?**

For your convenience, AES has all our phone lines transfer to a location that is open. As an example, if you call the Orlando store at 6:00 PM Eastern Time, Milwaukee will answer because Orlando has closed for the day, while Milwaukee is still open. All stores are open 9:00 AM - 5:30 PM in their time zone. Orlando and Wickliffe are in the Eastern Time zone, Milwaukee is in the Central and Las Vegas is in the Pacific Time zone.

## **Can I use the water pipes in my house as a ground?**

Water pipes are not good grounding points. They can, in some cases, act as an antenna and cause spurious harmonics. In addition, the pipe joints act as diodes, which will create RF problems in your shack. The best ground is an 8 foot copper clad rod driven into the ground.

## **How can I pay for my order?**

AES accepts a wide range of payment types. The easiest method is to use your credit card. We accept Mastercard, Visa, Discover, Novus, American Express and government cards. We also will ship your order COD, if the merchandise total is over \$20. You will have to present the UPS driver with cash, certified funds or a money order. There is an additional charge of \$6.50 for this type of shipment. You can also send us the funds prior to AES shipping the order. Your choices here would be money order, certified check, cashiers check or your personal check. Another choice for you is a wire or bank transfer. Just contact your bank and ask to have funds sent to us. After receiving the transfer, we can ship your order. This procedure will vary slightly depending on your institution's policies and regulations.

## **Can I speak with a service technician?**

Yes you can, in fact, AES has a direct line to our service department. You can reach a technician at 414-358-4087.

## **Can I purchase from AES if I live overseas?**

Absolutely. The best way to facilitate an international order is as follows: On a piece of paper write your mailing address, as well as the shipping address if different, plus the items you wish to order. Next, write down your credit card number and put your signature on the paper. Then photocopy both sides of your credit card and fax the papers to AES at (414) 358-3337.

## **What can I do if the original manufacturer of my HT is no longer making batteries for it?**

AES carries several makers of aftermarket batteries. In most cases we should be able to find a replacement battery for your HT.

## **What is the best way to study for a license class test?**

That question really doesn't have an answer. Because everyone has their own likes and dislikes when it comes to studying, there is no clear-cut preference. Some prefer books, others like tapes, while more and more people are now using computer programs. What ever your choice, AES has all formats of study material.

## **Can I order from AES on the Internet?**

Absolutely, in fact, we are using a secure server so you need not worry about using your credit card while placing an order. This allows you to shop our store in the comfort of your home and do it at your convenience. You may also request AES catalogs or be placed on the e-mailing list via Internet, as well.



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FOR MORE INFORMATION:

Mail: HamCation  
P.O. Box 547811  
Orlando, FL 32854-7811

Commercial Exhibits	Tim Starr AE4NJ	407 850-9258
Swap Tables	Wayne Nelson KB4UT	407 851-2627
RV Reservations	Ron Newsam KD4NLF	407 843-0810
General Chairman	Tim Starr AE4NJ	407 850-9258
Tailgating	Ron Newsam KD4NLF	407 843-0810
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**Radio Recyclers**, operated in Milwaukee for the past eight years by Neil Lawton, WK9Q, has moved right next door to AES. Specializing in buying, selling & trading used Amateur, Classic, & Antique radio equipment. Radio Recyclers is one of the nation's largest Radio Estate Liquidators and supplier of old radio parts.

The 3,000 sq. ft. store has a constantly rotating stock of pre-owned radios & accessories, test equipment and components. There's a huge selection of over 40,000 vacuum tubes of all types, new & used, from miniatures to RF power amplifier types.

Items on the well-stocked shelves and in the bins reveal a 70-year history of radio from the hamshacks of radio experimenters; old-timers & today's amateurs alike. Stop in and visit next time you're at AES, you'll be amazed!

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## Special Incentive Program for Ham Radio Clubs...

Everybody likes something when it's FREE! Well, we have a deal for you. Your club can accumulate *Purchasing Power* at AES. Use it for a new repeater antenna, a radio for the club station, or for prizes at your swapfest – anything you want!

The way it works is very simple. Every time a Club Member buys something from AES, at our everyday low prices, AES will allow the club 1% of the invoice total towards a purchase. In simple terms, your club member saves by buying at AES and your club accumulates *Free funds* for equipment, etc.

The accrual period is one year, starting September 1, 1997, ending September 1, 1998. You can use it before that time but it does not carry over from year to year. If the item or items total more than what is in the fund the club may pay for the difference. All requests for merchandise must be on a club letterhead and, if there is a difference, paid for with a club check.

Starting now, have your club members turn-in a copy of their AES purchase invoices to a club representative. Have him throw all those receipts in a box and start building the fund (based on 1% of those invoices) toward the radios, antennas or whatever the club needs.

Talk this up at every membership meeting, breakfast, or wherever you see each other and start getting them involved. With just a little effort your club could acquire a significant amount of new equipment virtually FREE!

Any questions about this program may be directed to me at 1-800-558-0411.

Sincerely,

*Mike Hansen*

Mike Hansen, N9LBQ  
AES Sales and Marketing

PS Please remember to keep copies of the receipts. We must have those in order to apply the 1% towards your purchases.



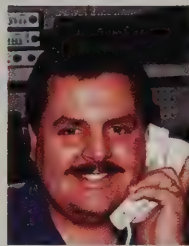


# AMATEUR ELECTRONIC SUPPLY<sup>®</sup> Inc.

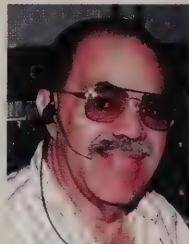
Proveedores de equipos para los radioaficionados de las Américas

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Estamos cerca del Aeropuerto Internacional de Orlando, Florida ee uu



Eddie KD4RAZ



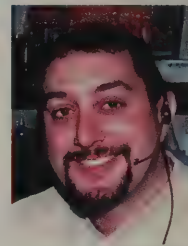
Rodrigo TI2WD

**Cuatro radioaficionados expertos para atenderles**

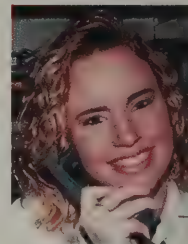
**Llámenos ... Enviaremos su pedido a la dirección**

**que nos indique ...  
¡No Importa Dónde!**

**¡Ningún pedido es demasiado grande o chico!**



Marcial NP4XB



Charity KF4RQY

**Internacionales**

**1-407-898-1166**

**export@aesham.com**

**www.aesham.com**

**Para Contactar:**

**AMATEUR ELECTRONIC SUPPLY<sup>®</sup> • 621 Commonwealth Avenue, Orlando, Florida 32803, EUA Tel. 1-407-894-3238; Toll Free 1-800-327-1917; Fax 1-407-894-7553; Internacionales 1-407-898-1166**

**Forma de pago:** El pago que se prefiere es por transferencia de fondos. No se aceptan giros bancarios internacionales. Las tarjetas internacionales de crédito se aceptan únicamente en nuestros salones de venta. Nuestra dirección para la transferencia de fondos es: Barnett Bank of Orlando, Fashion Square Branch, Orlando, Florida. Routing #063103193, para crédito a Amateur Electronic Supply - Acct. #1300009536.

**Método de envío:** El envío se hará de acuerdo con sus instrucciones. Si UD. no las indica AES hallará el método más adecuado.

**Garantía:** La fábrica garantiza sus equipos únicamente dentro de los Estados Unidos. Si su equipo necesitara reparación debe devolverlo a AES con una copia de la garantía y de la factura dentro del plazo autorizado por el fabricante. AES se reserva el derecho de reparar o substituir el equipo que no funcione como diseñado por razones que no resultaron por daño durante el envío. Al recibir el equipo que no funcione o por defectos debe notificarse a AES antes de los 10 días después de recibido. El equipo debe empacarse en la caja original usando los materiales de empaque originales. **El costo del envío, tanto de ida como de vuelta, es por cuenta del cliente.** Los precios y garantías pueden cambiarse sin previo aviso. Algunos productos no pueden ser exportados a ciertos países de acuerdo con las legislaciones locales.

I-4 este hasta la salida 41 (Amelia) continuar paralelo hasta Colonial Dr. Doblar a la derecha 2.6 millas (4.0 kilo) hasta Commonwealth Ave. doblar a la Derecha 1/2 cuadra.

### ABREVIACIONES IMPORTANTES

AMP	Amplificador
ANT	Antena
AT	Acoplador automatico de antena
BATT	Bateria
BKT	Braket de montura
BPR	Guarda choque
CGR	Cargador
CIG	Conector cigarillo
CNTR	Contador
DB	Decibeles
DLX	Lujo
DPLX	Duplexador
EL	Elemento
FREQ	Frecuencia
GND	Tierra
GTR	Labio de ventana
HT	Radio de mano
HVY	Pesado
KYR	Llave
MA	Miliamperes
MAG	Magnetico
MAINT	Mantenimiento
MIC	Microfono
MT	Montura
MTG	Montura
NMO	Montura Motorola
PROG	Programable
PS	Fuente de poder
PWR	Poder
RCVR	Receptor
REM	Remoto
SENS	Sensitividad
SPKR	Bocina
SPLX	Simplex
SYS	Sistema
TTP	Teclado de botones
VOL	Volumen
W/	Con
WPM	Palabras por minuto
XCVR	Transceptor



# We Invite You to Visit the Nearest AES® Location

**Hours at ALL Locations:** Monday – Friday 9:00 A.M. - 5:30 P.M. • Saturday 9:00 A.M. - 3:00 P.M.



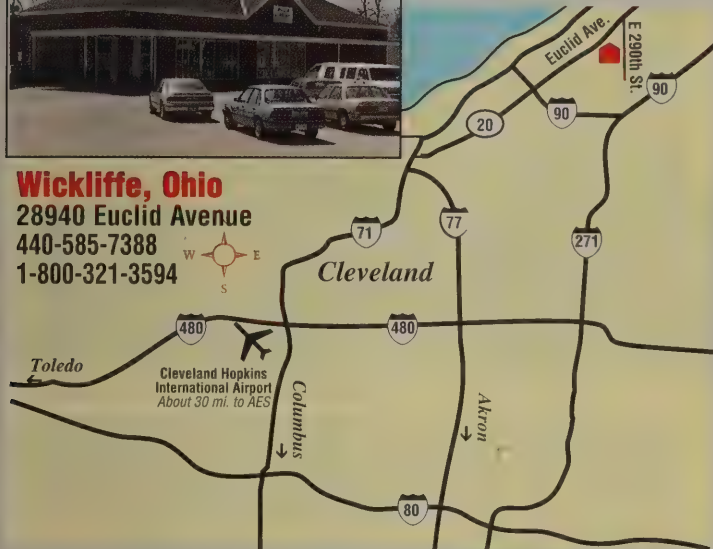
## Milwaukee, Wisconsin – Headquarters

5710 W. Good Hope Road  
414-358-0333 • 1-800-558-0411



## Wickliffe, Ohio

28940 Euclid Avenue  
440-585-7388  
1-800-321-3594



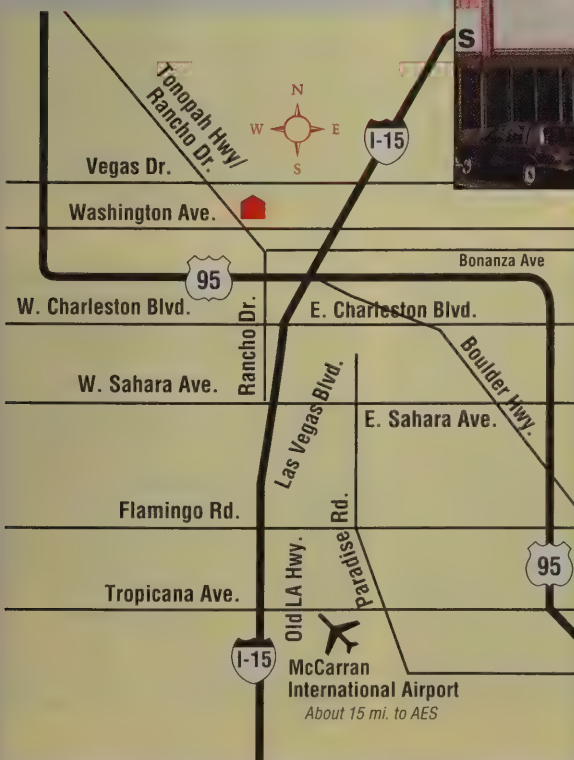
## Orlando, Florida

621 Commonwealth Avenue  
407-894-3238 • 1-800-327-1917



## Las Vegas, Nevada

1072 N. Rancho Drive  
702-647-3114  
1-800-634-6227





# AES<sup>®</sup> SALES TEAM



DALE N9BRX  
Store Manager



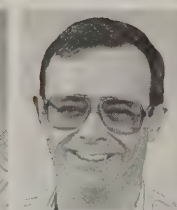
DICK KE9QU



ERV N9XRT



GARY L. KA9YT8



GARY S. W9NR



JARED KB9LTV



JEFF N9EDQ



MIKE N9LBQ



PAUL W9KHO



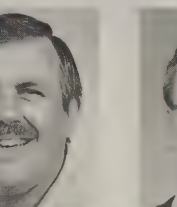
RAY K9KHW



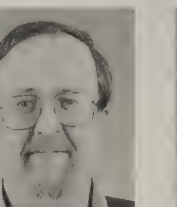
RICK N9PMR



RON WA9VRY



SKIP KB9PBQ



STEVE N9SO



TOM N9UJJ

**M**ilwaukee, WI 414-358-0333  
1-800-558-0411



BEN AA8AH  
Store Manager



BOB WB8WEN



DAVE WB8BAG



HAL



NANCY



PHILLIP KB8GA



ROD WB8RQX

**W**ickliffe, OH 440-585-7388  
1-800-321-3594



BRUCE WD4HIM



CHARITY KF4RQY  
Hablo español



EDDIE KD4RAZ  
Hablo español



ERNIE K1HO



GRANT K4IQW  
Store Manager



MARCIAL NP4XB  
Hablo español



RODRIGO TI2WD  
Hablo español



STUART N4IPX

**O**rlando, FL 407-894-3238  
1-800-327-1917



BOB KG7D



LUKE KK7BW



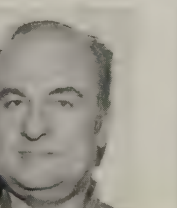
MEL N6SJQ



SQUEAK AD7K  
Store Manager



STEVE NM7J



TERRY

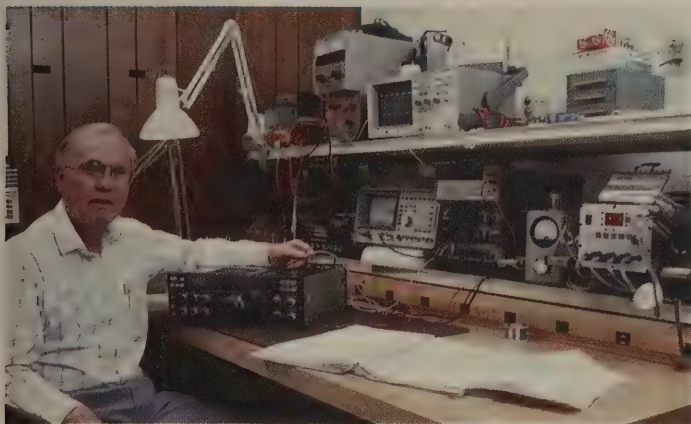


TOM N7GBJ

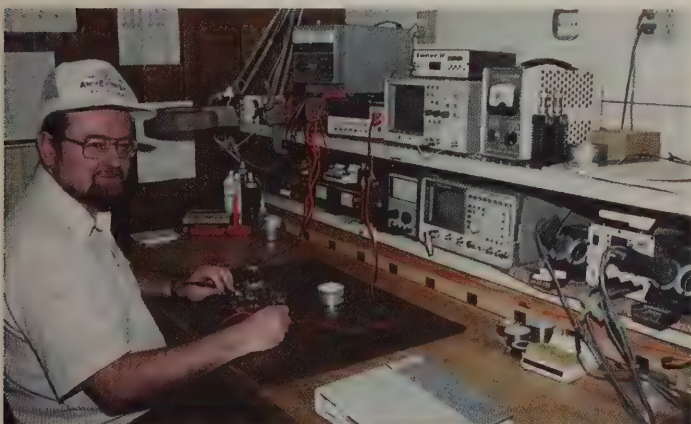
**L**as Vegas, NV 702-647-3114  
1-800-634-6227



# AES<sup>®</sup> SERVICE TEAM



MILES, K9HMQ • Milwaukee



BILL, WB7SAJ • Milwaukee



PAUL, N9KEZ • Milwaukee



JOHN, WA8PKB • Wickliffe



GIL, K4ISK • Orlando



STUART, N4IPX • Orlando



BOB, KG7D • Las Vegas

## WE'RE A FULL SERVICE DEALER

Unlike other Dealers, when you purchase a New Radio from us, our Service Department is able to provide you with Outstanding Technical Service and assistance.

If you have a problem, we are determined to keep you on the air! To do this, we offer Priority Warranty Service on ALL New Radios that we sell. You can be assured that if your New Radio fails within 10 days after receiving it, it will be repaired promptly, or we'll replace it! If a failure occurs after the 10 day priority period, it will be repaired under our "Warranty Repairs First" policy, which will get you back on the air with minimum delay.

## TECHNICIANS

We have 7 full-time and 4 part-time technicians. Three are shown in their shops in Milwaukee. Also pictured are: John, WA8PKB in Wickliffe, OH; Gil, K4ISK & STUART, N4IPX in Orlando, FL and Bob, KG7D in Las Vegas, NV.

## EXPERIENCE

Our technicians are all Factory-Trained on the major brands (ALINCO, ICOM, KENWOOD, YAESU) and others. They have more than 70 years of cumulative experience in the ham service field and are FCC and NABER certified.

## WE'RE EQUIPPED TO DO THE JOB

Each shop uses a state-of-the-art Hewlett Packard 8920A test set, which replaces several pieces of conventional test equipment. It combines twenty-two different instruments including a spectrum analyzer, tracking generator, digital scope, distortion and SINAD meter, all mode signal generator, frequency counter and more! It's highly stable, very accurate and helps speed repairs because it's I-BASIC computer allows the technicians to store custom test parameters for equipment that they frequently service. We also use H-P's digital scopes and DVM's, plus we have the latest in high-tech soldering stations for accurate and time-saving work on the latest delicate surface mount technology.

## REPAIRS

Whether you purchased from us or not, we can extend our Professional Technical Service to your "out of warranty late model ham gear. This is on a time available basis, and provided that service parts are still available. To make arrangements, call the our Service Department in Milwaukee at 414-358-4087; ask for Miles.

## LABOR RATES

Our rate for Out-of-Warranty Service is \$54.00 per hour. Note: There is a \$72.00 minimum charge for service on HF/VHF Base Stations, and a \$54.00 minimum charge on VHF Mobiles and Handheld transceivers.

**CALL 414-358-4087 for SERVICE**



# World's Largest Ham Radio inventory including accessories!



## NO NEED TO SHOP AROUND, WE MAKE IT EASY!

- ★ Huge Inventory of Major items and all related Accessories
- ★ Knowledgeable Salespersons ★ Outstanding Mail Order Service
- ★ Toll Free Lines at all locations ★ BBS, E-mail & Web Site
- ★ Service Department ★ Major Credit Cards ★ Gift Certificates ★ More!

### SAME DAY ORDER PROCESSING

When You Need It ... Its' There!



Most orders Picked and Packed for Same Day Shipment!

### FLAT RATE SHIPPING via UPS GROUND in the LOWER 48 STATES

AMOUNT OF ORDER	SHIPPING CHARGES
Up to \$100.00 .....	<b>\$4.95</b>
\$100.01 to \$500.00 .....	<b>\$9.95</b>
\$500.01 to \$1,499.99 .....	<b>\$14.95</b>
\$1500.00 & UP .....	<b>PREPAID</b>

*Flat Rate Does Not Apply To Drop Shipments*

**The Flat Rate Advantage – No Penalty for Number of Cartons or Weight!**

### IMPORTANT INFORMATION

- Shipping charges are based on the Order Total at the time of the initial shipment. Changes made to a partially shipped order will not affect the shipping charges.
- The order amount on which charges are determined is pre-coupon and pre-tax.
- 2nd and 3rd shipments (back-orders) are shipped PREPAID at AES® expense via UPS Ground Service, only).
- COD fees are not included. Add \$6.50 per carton.
- The Shipping Charge includes adequate insurance.
- Other UPS methods (Red, Blue & Orange), RPS, Priority Mail, Parcel Post and Federal Express are charged at Regular Rates without any credit for UPS ground rates.
- Questions? – Check with your salesperson when ordering.

## Gift Certificates - Let 'em make the Choice!

AMATEUR ELECTRONIC SUPPLY  
5710 W. GOOD HOPE ROAD.  
MILWAUKEE, WISCONSIN 53223  
(414) 358-0333

NO. 0000

DATE \_\_\_\_\_ 19\_\_\_\_

THIS CERTIFICATE ENTITLES \_\_\_\_\_

TO MERCHANDISE  
VALUED AT \_\_\_\_\_ DOLLARS \$ \_\_\_\_\_

PRESENTED BY \_\_\_\_\_

AUTHORIZED SIGNATURE \_\_\_\_\_

**Can't decide what to give  
that favorite Ham Operator  
on a Birthday, Anniversary,  
Holiday, or Special Day?**

We have Gift Certificates and a selection of over 5,000 Major items and Accessories to choose from.

Certificates may be purchased from our Milwaukee store by calling:

**1-800-558-0411**









UPS Ground Shipping is at the AES Flat Rate. The chart below shows faster UPS shipping methods and their rates.  
This zone chart is for shipments made from the Milwaukee store. The rates from Branch Stores may vary.

3 DAY SELECT ZONES										ZONE CHART									
NOT TO EXCEED IN LBS	ZONES										ZIP CODE PREFIXES	ZONE	ZIP CODE PREFIXES	ZONE	ZIP CODE PREFIXES	ZONE			
	302	303	304	305	306	307	308	309	310	311									
1	\$4.00	\$4.00	\$4.00	\$5.10	\$5.30	\$5.60	\$5.80					004-005	5	560-574	4	004-005	5		
2	4.00	4.00	5.10	5.80	6.10	6.50	6.80					006-007	5	575-577	5	006-007	5		
3	5.00	5.00	5.80	6.50	7.00	7.80	8.00					008	—	580-582	4	008	—		
4	5.40	5.80	6.40	7.10	7.80	8.30	8.80					009	583	583	5	009	583		
5	6.10	6.30	6.90	7.70	8.50	9.10	9.70					010-089	5	584	4	010-089	5		
6	6.10	6.80	7.50	8.40	9.30	10.00	10.70					090-099	5	585-588	5	090-099	5		
7	6.50	7.30	8.10	9.10	10.10	10.90	11.70					100-129	5	590-591	5	100-129	5		
8	6.90	7.80	8.70	9.80	11.00	11.90	12.70					130-132	4	592-593	5	130-132	4		
9	7.30	8.30	9.30	10.50	11.80	12.80	13.70					133-135	5	594-599	6	133-135	5		
10	7.70	8.80	9.90	11.20	12.60	13.70	14.70					136-174	4		5	136-174	4		
11	8.10	9.30	10.50	11.80	13.40	14.60	15.70					175-176	5	600-611	2	175-176	5		
12	8.50	9.80	11.10	12.50	14.20	15.50	16.70					177-179	4	612	3	177-179	4		
13	8.90	10.30	11.70	13.20	15.00	16.40	17.70					180-199	5	613	2	180-199	5		
14	9.30	10.80	12.30	13.90	15.90	17.30	18.70					200-214	5	614-619	3	200-214	5		
15	9.70	11.30	12.90	14.70	16.80	18.20	19.70					215	4	620-622	3	215	4		
16	10.10	11.80	13.50	15.40	17.60	19.10	20.70					216	5	623-628	3	216	5		
17	10.50	12.20	14.10	16.10	18.40	20.00	21.70					217	5	629-633	3	217	5		
18	10.90	12.70	14.70	16.80	19.20	20.90	22.70					218	5	634	3	218	5		
19	11.30	13.20	15.30	17.50	20.00	21.80	23.70					219	5	635-669	4	219	5		
20	11.70	13.70	15.90	18.20	20.80	22.70	24.60					220	5	670-672	5	220	5		
21	12.10	14.20	16.50	18.90	21.60	23.60	25.50					221	5	673-674	4	221	5		
22	12.50	14.70	17.10	19.60	22.40	24.50	26.50					222-229	5	675-679	5	222-229	5		
23	12.90	15.20	17.60	20.20	23.20	25.40	27.50					230-239	5	680-689	4	230-239	5		
24	13.30	15.70	18.20	20.90	24.00	26.30	28.50					240-268	4	690-693	5	240-268	4		
25	13.80	16.20	18.80	21.60	24.80	27.20	29.50					270-286	4	700-722	5	270-286	4		
26	14.20	16.70	19.40	22.30	25.60	28.10	30.50					287-289	4	723-727	4	287-289	4		
27	14.60	17.20	20.00	22.90	26.40	29.00	31.50					290-299	5	728-732	5	290-299	5		
28	15.00	17.60	20.60	23.50	27.30	29.90	32.50					300-306	5	733	6	300-306	5		
29	15.40	18.10	21.20	24.20	28.20	30.80	33.50					307	5	734-742	4	307	5		
30	15.80	18.60	21.80	24.90	29.00	31.60	34.40					308-326	5	743	4	308-326	5		
31	16.20	19.10	22.40	25.60	29.80	32.60	35.30					327-339	6	744-768	5	327-339	6		
32	16.60	19.60	23.00	26.30	30.60	33.40	36.30					340-341	5	769	6	340-341	5		
33	17.00	20.10	23.60	27.00	31.40	34.30	37.30					342	5	770-778	5	342	5		
34	17.40	20.60	24.20	27.70	32.20	35.30	38.30					344	5	779-789	5	344	5		
35	17.80	21.10	24.80	28.40	33.00	35.90	39.30					346-349	5	790-796	5	346-349	5		
36	18.20	21.60	25.40	29.10	33.80	36.80	40.30					350-355	5	797-799	6	350-355	5		
37	18.60	22.10	26.00	29.80	34.60	37.70	41.20					356-358	4	800-810	5	356-358	4		
38	19.00	22.60	26.50	30.50	35.40	38.60	42.20					359-369	5	811	6	359-369	5		
39	19.40	23.10	27.00	31.20	36.20	39.40	43.20					370-386	5	812	6	370-386	5		
40	19.80	23.50	27.50	31.70	37.00	40.20	44.20					387-399	5	813-816	5	387-399	5		
41	20.20	24.00	28.00	32.50	37.80	41.00	45.20					400-409	4	820	6	400-409	4		
42	20.60	24.50	28.50	33.30	38.70	42.00	46.20					410	3	821	6	410	3		
43	21.00	25.00	29.00	34.00	39.50	43.00	47.20					411-432	4	822-824	3	411-432	4		
44	21.40	25.50	30.10	34.70	40.30	43.90	48.10					433-436	3	825	6	433-436	3		
45	21.80	26.00	30.70	35.40	41.10	44.80	49.10					437-447	4	826-828	3	437-447	4		
46	22.20	26.50	31.20	36.10	41.90	45.70	50.10					448-455	3	829-834	6	448-455	3		
47	22.60	27.00	31.80	36.80	42.70	46.60	51.10					456-457	4	835-838	7	456-457	4		
48	23.00	27.50	32.40	37.50	43.50	47.50	52.10					463-466	3	840-847	6	463-466	3		
49	23.40	28.00	33.00	38.20	44.30	48.40	53.10					467-470	4	850-854	7	467-470	4		
50	23.80	28.50	33.60	38.90	45.10	49.30	54.10					471	5	855	6	471	5		
51	24.20	29.00	34.20	39.60	45.90	50.20	55.10					474-475	3	856-858	6	474-475	3		
52	24.60	29.40	34.80	40.20	46.70	51.00	56.10					478-479	3	859-860	6	478-479	3		
53	25.00	29.90	35.40	40.90	47.50	51.90	57.10					488-489	3	863-864	7	488-489	3		
54	25.40	30.40	36.00	41.60	48.30	52.80	58.10					488-491	2	865-883	3	488-491	2		
55	25.80	30.90	36.50	42.30	49.20	53.70	59.10					492	3	884	5	492	3		
56	26.20	31.40	37.10	43.00	50.00	54.60	60.10					493-496	2	885	6	493-496	2		
57	26.60	31.90	37.70	43.70	50.80	55.50	61.10					497-499	3	889-898	7	497-499	3		
58	27.00	32.40	38.30	44.30	51.60	56.50	62.10					500-503	4	900-930	7	500-503	4		
59	27.40	32.90	38.90	45.00	52.40	57.30	63.10					504	3	931	8	504	3		
60	27.80	33.40	39.50	45.70	53.20	58.20	64.10					505	3	932-933	7	505	3		
61	28.20	33.90	40.10	46.40	54.10	59.10	65.10					506-507	3	934	8	506-507	3		
62	28.60	34.40	40.70	47.10	54.90	60.00	66.10					508-516	4	935-938	7	508-516	4		
63	29.00	34.90	41.30	47.80	55.70	60.90	67.10					510-519	5	939-941	8	510-519	5		
64	29.40	35.40	41.80	48.40	56.50	61.80	68.00					521-528	2	942	8	521-528	2		
65	29.80	35.80	42.40	49.10	57.30	62.70	69.00					530-539	3	943-951	8	530-539	3		
66	30.20	36.30	43.00	49.80	58.10	63.60	70.00					540	3	952-953	7	540	3		
67	30.60	36.80	43.60	50.50	58.90	64.50	71.00					541-544	2	954-955	8	541-544	2		
68	31.00	37.30	44.20	51.20	59.70	65.40	72.00					545-548	2	956-961	7	545-548	2		
69	31.50	37.80	44.80	51.90	60.50	66.30	73.00					549	2	962-966	7	549	2		
70	31.90	38.30	45.30	52.60	61.30	67.20	73.90					550-555	3	967-968	7	550-555	3		
71	32.40	38.80	45.80	53.30	62.10	68.10	74.90					556-558	4	969	7	556-558	4		
72	32.90	39.30	46.30	53.90	62.90	69.00	75.90					559	3	970-994	7	559	3		

ANY FRACTION OF A POUND OVER THE WEIGHT SHOWN IN THE FIRST COLUMN RATE.



# Understanding the AES System

**Exactly what does it take to keep AES on top of the game, ready to serve any customer, anywhere, as fast and accurately as possible? Of course, a dedicated staff — and the largest and most comprehensive computer system in the ham radio retail industry to keep everything organized and to serve you more efficiently.**

Our mainframe is an IBM AS-400 Model 510, located at our corporate office in Milwaukee, WI. This computer has a capacity large enough to store order transaction history for our huge list of over 400,000 customers. It keeps track of our entire inventory of new, used and demo equipment at all locations. And it also handles all of our office accounting tasks while having memory to spare.

This system links all of our branch locations live, in real time through full-time, dedicated, 56 kilobaud telephone lines. This allows our staff to locate inventory items at all of our locations to fill your orders more efficiently. AES tries to ship from the closest location to you, which ensures prompt delivery of your order.



Barb (top) & Shirley (bottom) utilizing the AS-400 system

To compliment our expanded capabilities, AES has taken steps to insure that you can contact us during the week Monday through Friday between 6 A.M. Pacific and 8:30 P.M. Eastern Time and on Saturday, 6 A.M. Pacific to 6:00 P.M. Eastern Time.

Before a branch store opens for the day, or closes for the night, all telephone lines automatically forward to our nearest open store; thereby, giving you almost twelve hours per day Monday - Friday and nine hours Saturday of telephone access to the most modern, up-to-date Amateur Radio Sales Organization in the world.

To you, our valued customer, this means receiving quick and accurate service from a modern facility through caring and truly dedicated amateur radio enthusiasts just like yourself. The reason AES takes all these steps in providing you with this level of service is because we know how important each and every purchase is to you. AES realizes

that when you put your faith and trust in us we need to perform, and we do. We urge you to compare AES to others in these areas. We know who will offer Great Selection, Huge Inventories, Quick Delivery and a staff willing to assist you with your Amateur Radio needs. It's AES.

## Following Orders

Now that you have decided it's time to place an order, you call AES, with our locations strategically placed throughout the country to serve you best.

Ten Hut

A salesperson assists you with your merchandise selection. At this time AES can, because of our leading edge computer system, locate the items you want at the AES location closest to your home. The order is entered and you are free to relax until it arrives.

About Face

Your order is printed in the order processing department. At this point, the address information on the order is checked for accuracy. If needed, it is changed at this time.

Forward March

Your order moves on to the recheck area. AES then checks the order for accuracy. We double check all orders so that your shipment arrives timely and without errors.

Left

Now your order arrives in the shipping department, where the items ordered are pulled from AES inventory.

Left

The merchandise is put into a staging area. Again it is checked for accuracy. AES wants you to enjoy your new equipment, not worry about how to ship the wrong items back.

Left Right

After it is checked for accuracy, your order moves to the packing section. As it is put into the appropriate cartons for shipping, yes, you guessed it, it's checked once more to make sure the items match the part numbers on your order. Then it is sealed and moved down the conveyor.

Left

Finally, your package is weighed, logged in our shipping records, stacked with the other orders and awaits pickup. This entire process, in most cases, is complete in less than 30 minutes.

Company Halt

**AES checks your order multiple times for accuracy and completeness. We strive to get your merchandise to you quickly and correctly. Please check with your salesperson for freight pickup times at various AES locations.**



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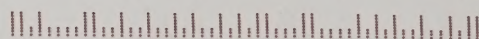
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